



## FEATURES

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

## MECHANICAL DATA

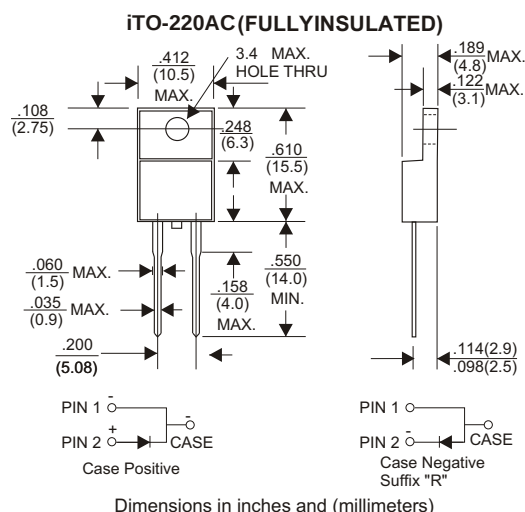
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Lead solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: As Marked
- \* Mounting position: Any

## VOLTAGE RANGE

50 to 1000 Volts

## CURRENT

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%.

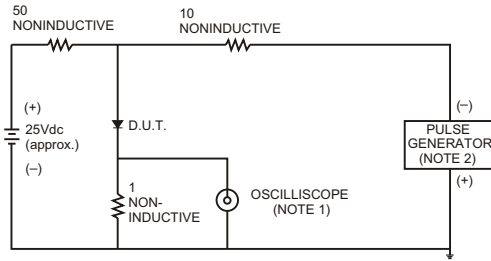
| TYPE NUMBER                                                                                           | MURF2005   | MURF2010 | MURF2020 | MURF2030 | MURF2040 | MURF2060 | MURF2080 | MURF20100 | UNITS |
|-------------------------------------------------------------------------------------------------------|------------|----------|----------|----------|----------|----------|----------|-----------|-------|
| 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                      | 20.0       |          |          |          |          |          |          |           | 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 20.0A                                                        | 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)                                                                 | 90         |          |          |          |          |          |          |           | 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 (MURF2005 THRU MURF20100)

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

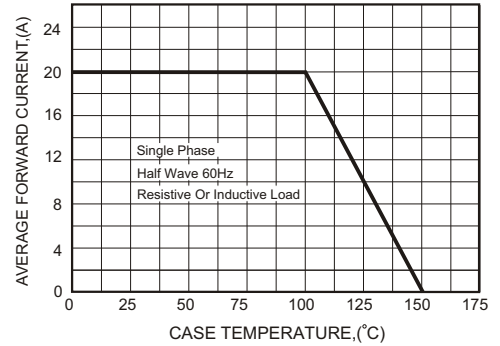


FIG.3-TYPICAL FORWARD CHARACTERISTICS

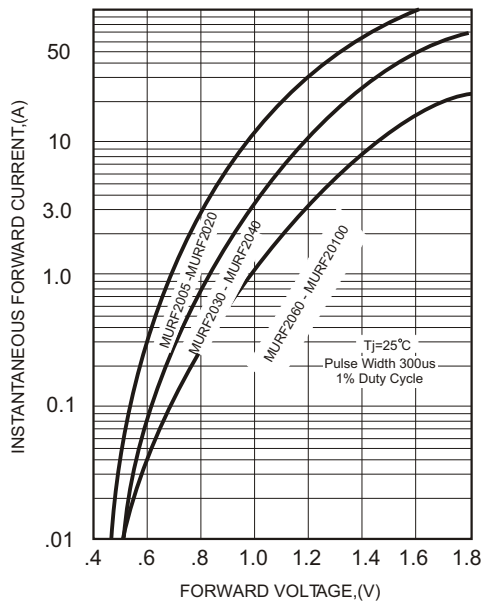


FIG.4-TYPICAL REVERSE CHARACTERISTICS

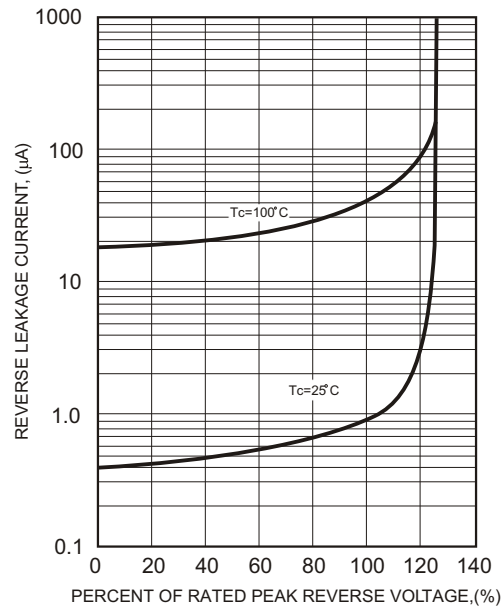


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

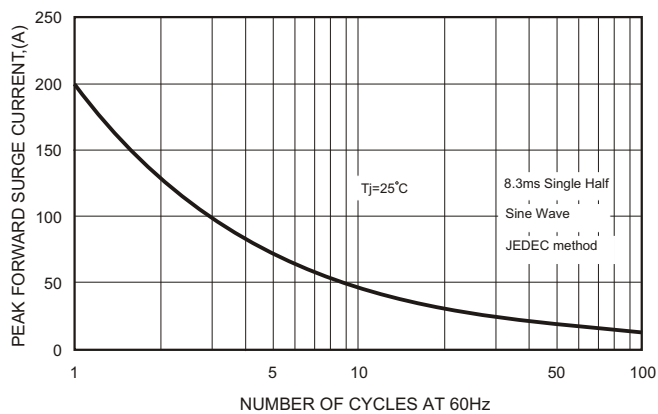


FIG.6-TYPICAL JUNCTION CAPACITANCE

