



# MURF1005CT THRU MURF10100CT

## 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

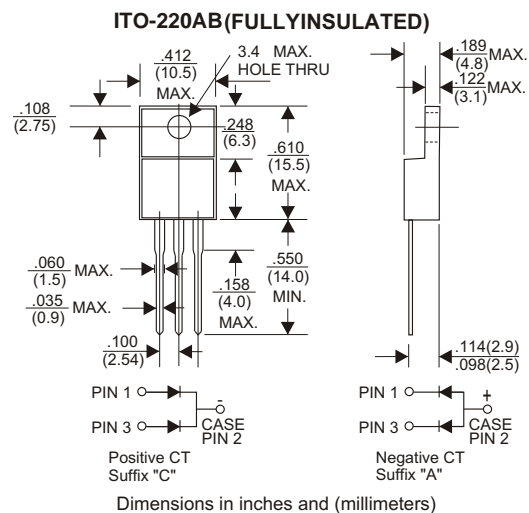
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Lead solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: As Marked
- \* Mounting position: Any

### VOLTAGE RANGE

50 to 1000 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%.

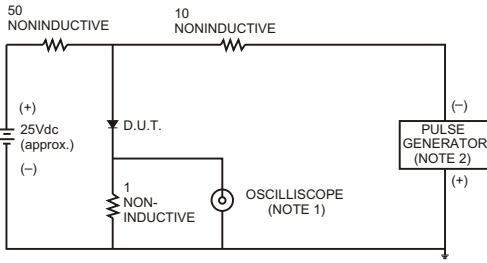
| TYPE NUMBER   | MURF1005CT | MURF1010CT | MURF1020CT | MURF1030CT | MURF1040CT | MURF1060CT | MURF1080CT | MURF10100CT | UNITS      |    |
|---|------------|------------|------------|------------|------------|------------|------------|-------------|------------|----|
| Maximum Recurrent Peak Reverse 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        |            | 1.85       |            |            |             | 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)  | 45         |            | 60         |            | 75         |            |            |             | 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 (MURF1005CT THRU MURF10100CT)

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

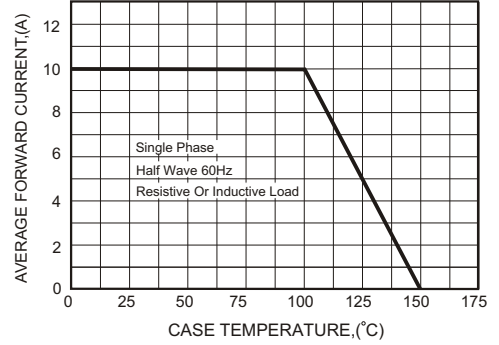


FIG.3-TYPICAL FORWARD CHARACTERISTICS

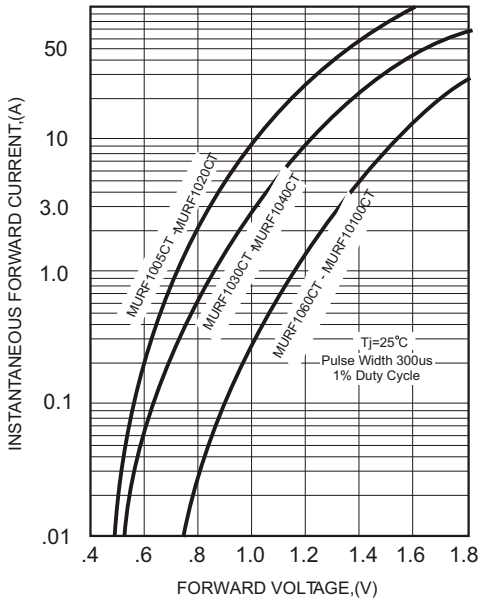


FIG.4-TYPICAL REVERSE CHARACTERISTICS

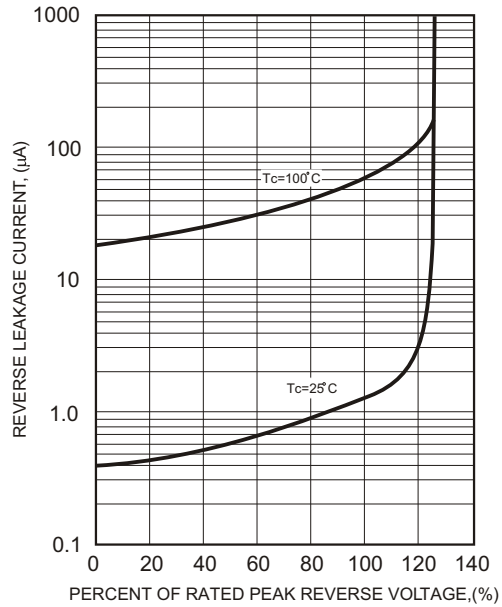


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

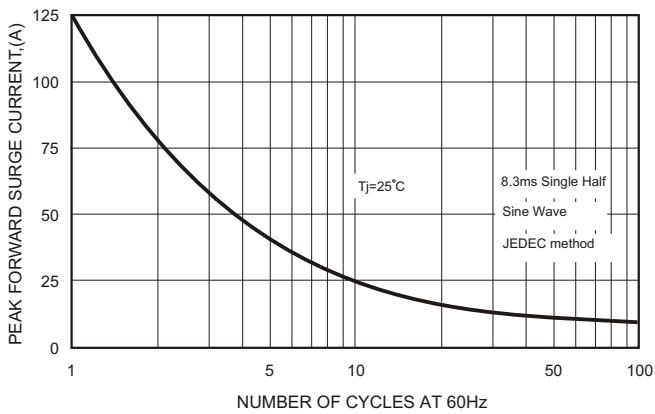


FIG.6-TYPICAL JUNCTION CAPACITANCE

