

## MUR2005CT THRU MUR20100CT

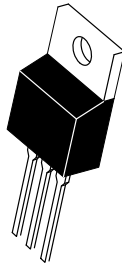
20.0 AMP SUPER FAST RECTIFIERS

### 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

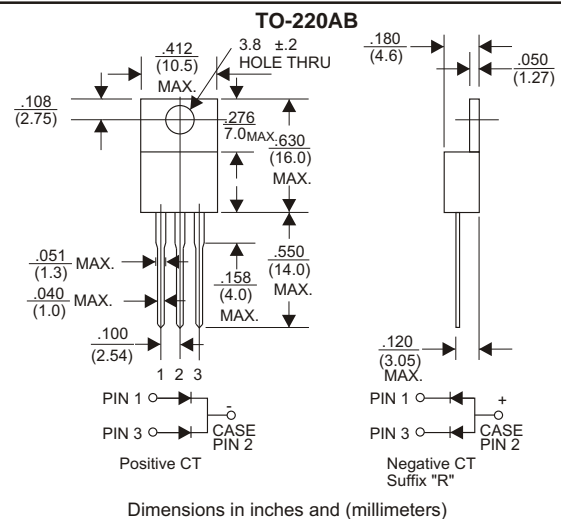


### VOLTAGE RANGE

50 to 1000 Volts

### CURRENT

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%.

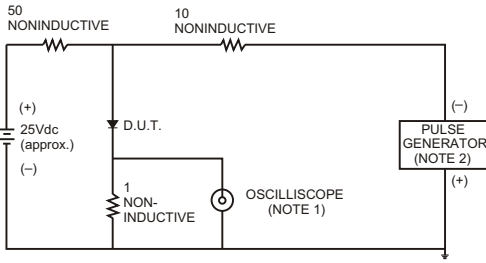
| TYPE NUMBER   | MUR2005CT  | MUR2010CT | MUR2020CT | MUR2030CT | MUR2040CT | MUR2060CT | MUR2080CT | MUR20100CT | UNITS |
|---|------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-------|
| Maximum Recurrent Peak Reverse Voltage  | 50         | 100       | 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:

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

## RATING AND CHARACTERISTIC CURVES (MUR2005CT THRU MUR20100CT)

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.

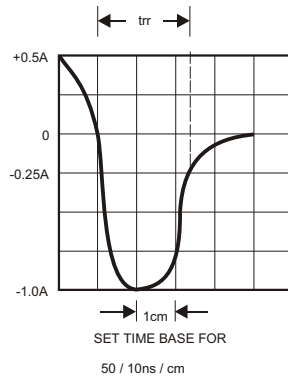


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

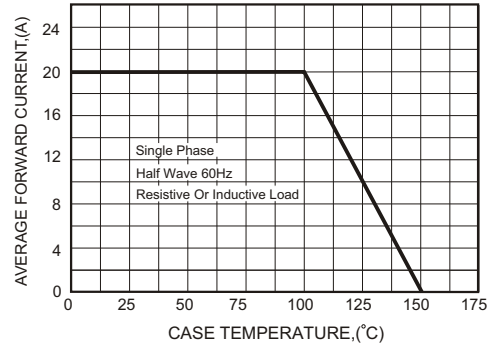


FIG.3-TYPICAL FORWARD CHARACTERISTICS

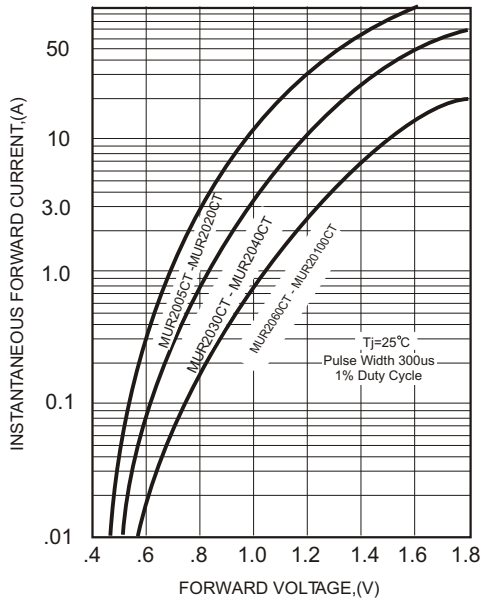


FIG.4-TYPICAL REVERSE CHARACTERISTICS

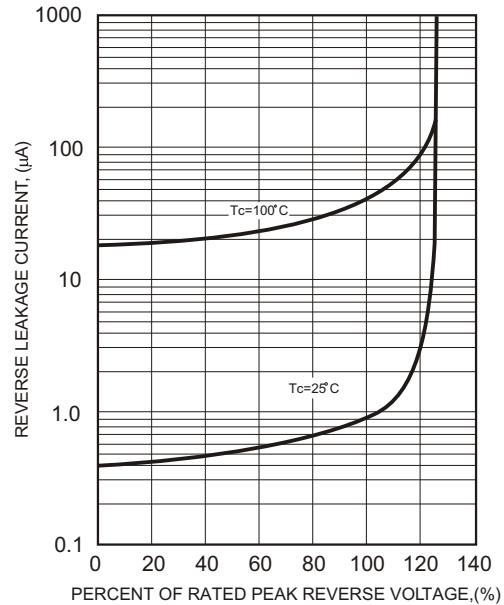


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

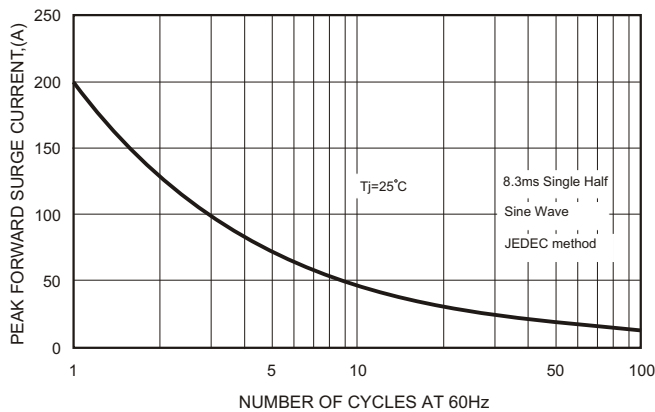


FIG.6-TYPICAL JUNCTION CAPACITANCE

