

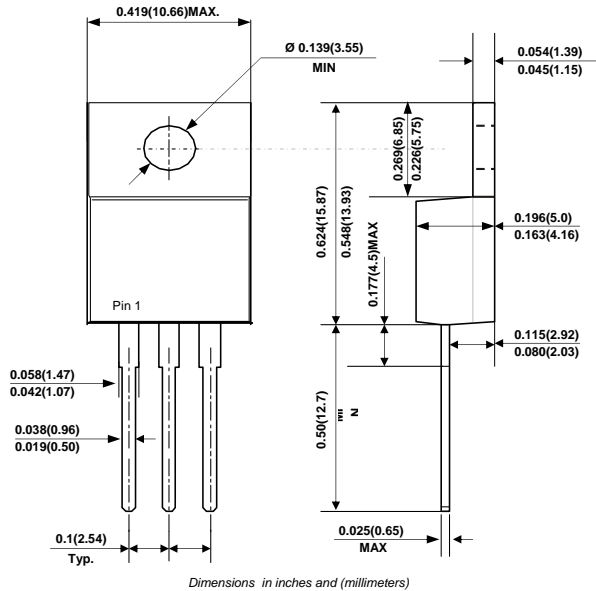


# MUR1005CT THRU MUR1060CT

## SUPER FAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 600 Volts Forward Current - 10.0 Ampere

### TO-220AB



### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0. Flame Retardant Epoxy Molding Compound.
- ◆ Exceeds environmental of MIL-S-19500/228
- ◆ Low power loss, high efficiency.
- ◆ Low forward voltage, high current capability.
- ◆ High surge capability.
- ◆ Super fast recovery times, high voltage.
- ◆ Epitaxial chip construction.
- ◆ In compliance with EU RoHS 2002/95/EC directives.

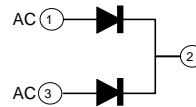
### MECHANICAL DATA

Case: TO-220AB, Molded plastic.

Terminals: Solderable per MIL-STD-750 · Method 2026

Weight: 1.859 gram (0.0655 ounces).

Standard Packaging : Tube.



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| PARAMETER  | SYMBOLS            | MUR1005CT  | MUR1010CT | MUR1020CT | MUR1040CT | MUR1060CT | UNITS |
|--|--------------------|------------|-----------|-----------|-----------|-----------|-------|
| Maximum Recurrent Peak Reverse Voltage   | V <sub>RRM</sub>   | 50         | 100       | 200       | 400       | 600       | Volts |
| Maximum RMS Voltage  | V <sub>RMS</sub>   | 35         | 70        | 140       | 280       | 420       | Volts |
| Maximum DC Breakdown Voltage   | V <sub>DC</sub>    | 50         | 100       | 200       | 400       | 600       | Volts |
| Maximum Average Forward Current at T <sub>C</sub> = 100°C  | I <sub>F(AV)</sub> | 10.0       |           |           |           |           | Amp   |
| Peak Forward Surge Current, 8.3ms single half sinewave superimposed on rated load (JEDEC method)     | I <sub>FSM</sub>   | 125        |           |           |           |           | Amps  |
| Maximum Forward Voltage at 5A  | V <sub>F</sub>     | 0.95       |           | 1.30      |           | 1.70      | Volts |
| Maximum DC Reverse Current at T <sub>J</sub> = 25°C Rated DC Blocking Voltage T <sub>J</sub> = 100°C | I <sub>R</sub>     | 1.0<br>500 |           |           |           |           | μA    |
| Maximum Reverse Recovery Time (NOTE 2)   | t <sub>rr</sub>    | 35         |           |           | 50        |           | pF    |
| Typical Junction Capacitance (NOTE 1)  | C <sub>J</sub>     | 62         |           |           |           |           | °C/W  |
| Typical Thermal Resistance   | R <sub>θJC</sub>   | 3.0        |           |           |           |           | °C    |
| Operating and Storage Temperature Range  | T <sub>STG</sub>   | -55 ~ +150 |           |           |           |           | °C    |

- Note:**
1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
  2. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1A, I<sub>rr</sub>=0.25A.
  3. Both Bonding and Chip structure are available.



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## RATINGS AND CHARACTERISTIC CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

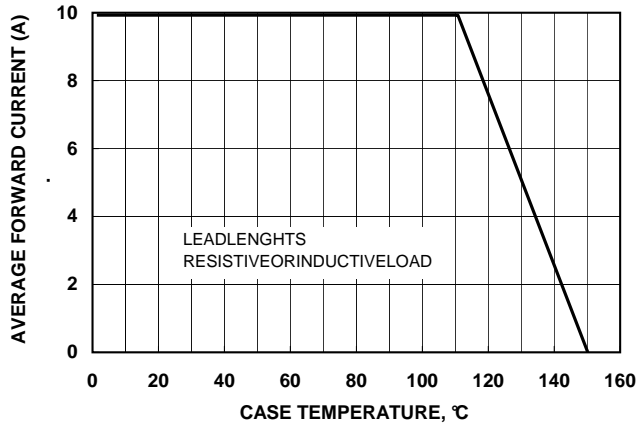


FIG. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

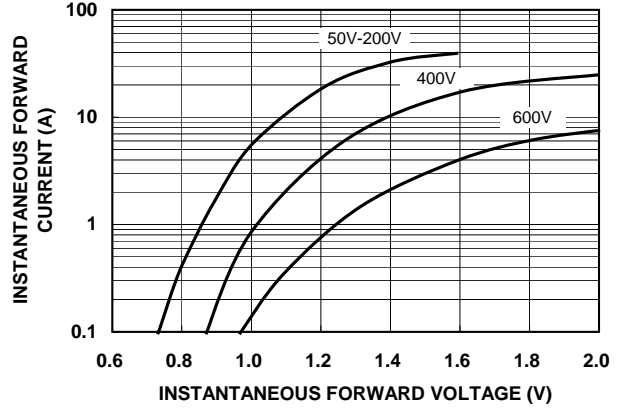


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

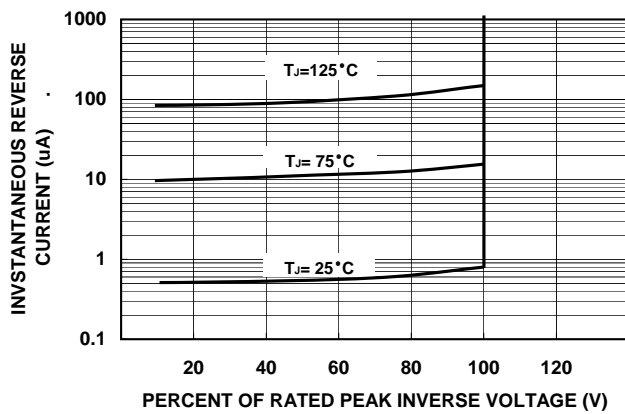


FIG. 4-MAXIMUM NON-REPETITIVE SURGE CURRENT

