

# MUR2005CT~MUR2080CT

## 20.0Amp Super Fast Recovery Rectifiers

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed  
260°C/10 seconds at terminals

### Mechanical Data

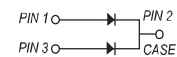
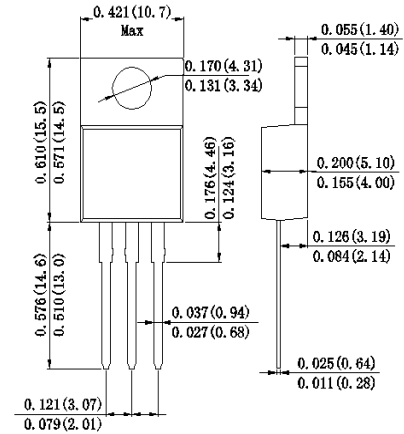
**Case :** Molded plastic body

**Terminals :** Solder plated, solderable per MIL-STD-750,Method 2026

**Polarity :** Polarity symbol marking on body

**Mounting Position :** Any

### TO-220AB



Dimensions in inches and (millimeters)

### 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           | MUR 2005CT   | MUR 2010CT | MUR 2020CT | MUR 2040CT | MUR 2050CT | MUR 2060CT | MUR 2080CT | UNITS |
|----------------------------------------------------------------------------------------------------------|-------------------|--------------|------------|------------|------------|------------|------------|------------|-------|
| Maximum repetitive peak reverse voltage                                                                  | V <sub>RRM</sub>  | 50           | 100        | 200        | 400        | 500        | 600        | 800        | V     |
| Maximum RMS voltage                                                                                      | V <sub>RMS</sub>  | 35           | 70         | 140        | 280        | 350        | 420        | 560        | V     |
| Maximum DC blocking voltage                                                                              | V <sub>DC</sub>   | 50           | 100        | 200        | 400        | 500        | 600        | 800        | V     |
| Maximum average forward rectified current at T <sub>c</sub> =110°C<br>per device<br>per diode            | I <sub>(AV)</sub> | 20.0<br>10.0 |            |            |            |            |            |            | A     |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load                       | I <sub>FSM</sub>  | 175.0        |            |            |            |            |            |            | A     |
| Maximum instantaneous forward voltage per diode at 10.0A                                                 | V <sub>F</sub>    | 1.0          |            |            | 1.4        | 1.8        |            | 2.0        | V     |
| Maximum DC reverse current at rated DC blocking voltage<br>T <sub>A</sub> =25°C<br>T <sub>A</sub> =125°C | I <sub>R</sub>    | 10<br>500    |            |            |            |            |            |            | μ A   |
| Maximum reverse recovery time                                                                            | T <sub>rr</sub>   | 35           |            |            | 50         |            |            |            | ns    |
| Typical thermal resistance                                                                               | R <sub>qJc</sub>  | 35.0         |            |            |            |            |            |            | °C/W  |
| Operating junction temperature range                                                                     | T <sub>J</sub>    | -55 to +150  |            |            |            |            |            |            | °C    |
| Storage temperature range                                                                                | T <sub>STG</sub>  | -55 to +150  |            |            |            |            |            |            | °C    |

**Note:**1.Reverse recovery time test condition:  $I_F=0.5A$   $I_R=1.0A$   $I_{rr}=0.25A$

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### Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

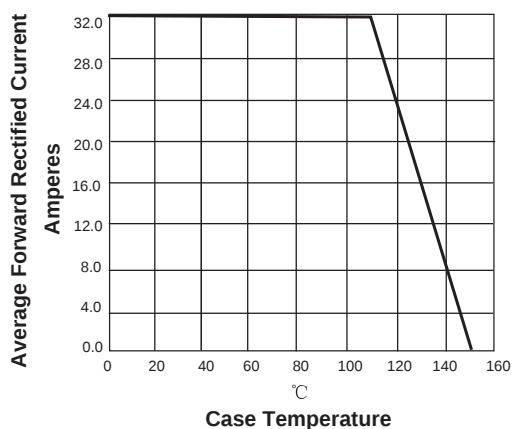


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

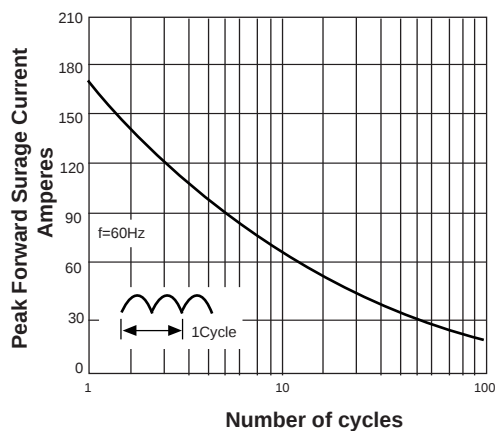


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

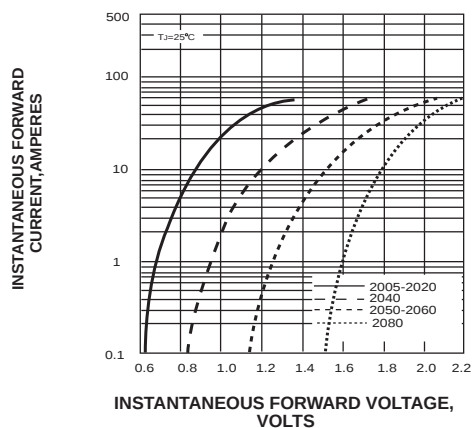


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

