

Pb Free Plating Product

MUR1020CTD/MUR1040CTD/MUR1060CTD



10 Ampere Heatsink Doubler Polarity Fast Recovery Half Bridge Rectifiers

**Features**

- ★ Latest GPP technology with super fast recovery time
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

**Application**

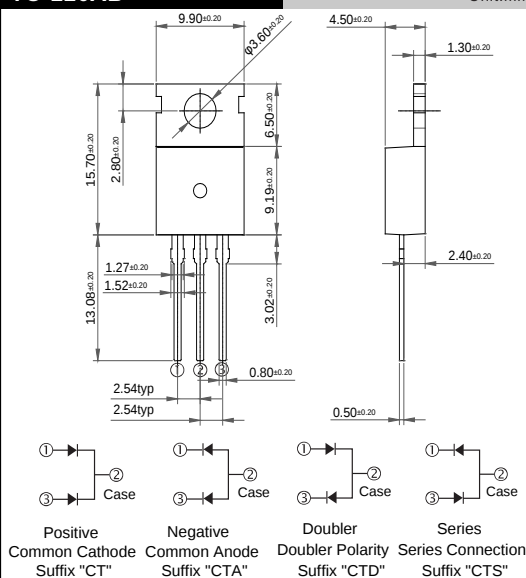
- ★ Automotive Inverters and Solar Inverters
- ★ Plating Power Supply, SMPS, Motor Control and UPS
- ★ Car Audio Amplifiers and Sound Device Systems

**Mechanical Data**

- ★ Case: Heatsink TO-220AB/TO-220CE
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-202 method 208
- ★ Polarity: As marked on diode body
- ★ Mounting position: Any
- ★ Weight: 2.0 gram approximately

**TO-220AB**

Unit:mm

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

|                                                                                                   | SYMBOL   | MUR1020CTD  | MUR1040CTD | MUR1060CTD | UNIT     |
|---------------------------------------------------------------------------------------------------|----------|-------------|------------|------------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                            | VRRM     | 200         | 400        | 600        | V        |
| Maximum RMS Voltage                                                                               | VRMS     | 140         | 280        | 420        | V        |
| Maximum DC Blocking Voltage                                                                       | VDC      | 200         | 400        | 600        | V        |
| Maximum Average Forward Rectified Current Tc=100°C                                                | IF(AV)   | 10.0        |            |            | A        |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method) | IFSM     | 100         |            |            | A        |
| Maximum Instantaneous Forward Voltage @ 5.0 A                                                     | VF       | 0.98        | 1.3        | 1.7        | V        |
| Maximum DC Reverse Current @Tj=25°C At Rated DC Blocking Voltage @Tj=125°C                        | IR       | 10.0<br>250 |            |            | uA<br>uA |
| Maximum Reverse Recovery Time (Note 1)                                                            | Trr      | 35          |            |            | nS       |
| Typical junction Capacitance (Note 2)                                                             | CJ       | 65          |            |            | pF       |
| Typical Thermal Resistance (Note 3)                                                               | RθJC     | 2.2         |            |            | °C/W     |
| Operating Junction and Storage Temperature Range                                                  | TJ, TSTG | -55 to +150 |            |            | °C       |

NOTES : (1) Reverse recovery test conditions  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{rr} = 0.25A$ .  
 (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.  
 (3) Thermal Resistance junction to case.

FIG.1 - FORWARD CURRENT DERATING CURVE

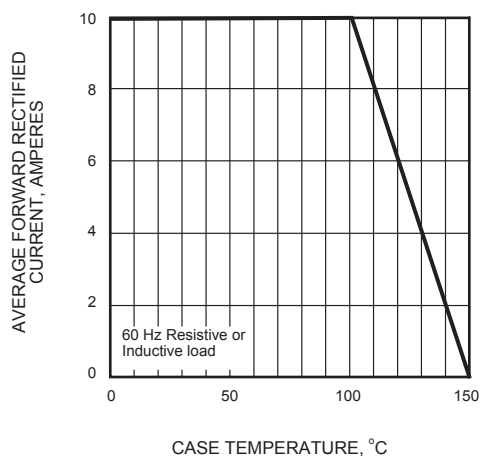


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

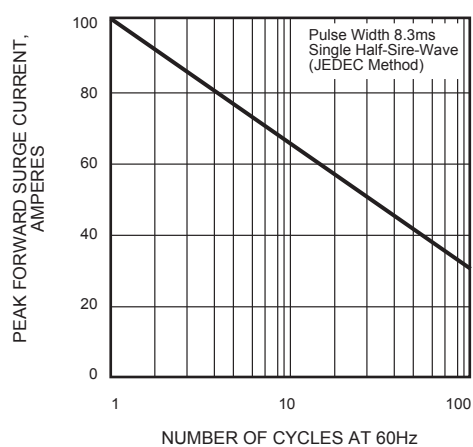


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

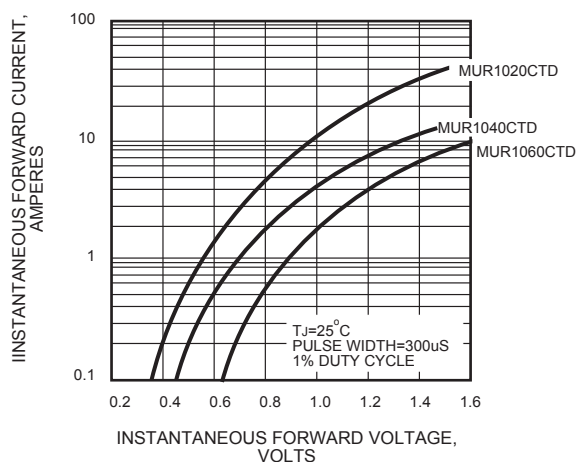


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

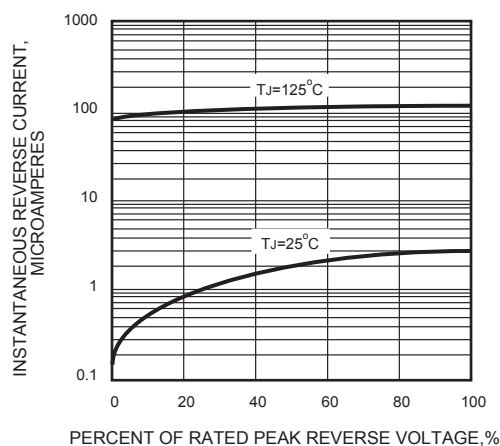


FIG.5 - TYPICAL JUNCTION CAPACITANCE

