

Pb Free Plating Product

## MURF1620CT thru MURF1660CT



16.0 Ampere Unipolar/Common Cathode Ultrafast Recovery Rectifiers

**Features**

- ★ Fast switching for high efficiency
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

**Application**

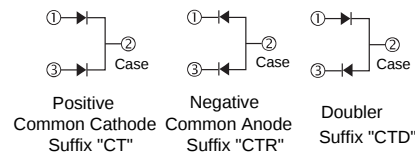
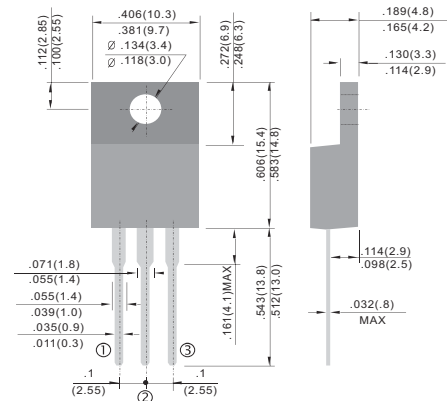
- ★ Automotive Environment/Inverters and Converters
- ★ Plating Power Supply/SMPS and UPS
- ★ Car Audio Amplifier and Sound Device System

**Mechanical Data**

- ★ Case: Molded plastic Isolated/Insulated ITO-220AB
- ★ 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: 2.03 grams

ITO-220AB

Unit : inch (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                            | MURF1620CT<br>MURF1620CTR<br>MURF1620CTD | MURF1640CT<br>MURF1640CTR<br>MURF1640CTD | MURF1660CT<br>MURF1660CTR<br>MURF1660CTD | UNIT     |
|---------------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                                  | V <sub>RRM</sub>                  | 200                                      | 400                                      | 600                                      | V        |
| Maximum RMS Voltage                                                                                     | V <sub>RMS</sub>                  | 140                                      | 280                                      | 420                                      | V        |
| Maximum DC Blocking Voltage                                                                             | V <sub>DC</sub>                   | 200                                      | 400                                      | 600                                      | V        |
| Maximum Average Forward Rectified Current T <sub>c</sub> =100°C                                         | I <sub>F(AV)</sub>                | 16.0                                     |                                          |                                          | A        |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)       | I <sub>FSM</sub>                  | 175                                      | 150                                      |                                          | A        |
| Maximum Instantaneous Forward Voltage @ 8.0 A                                                           | V <sub>F</sub>                    | 0.98                                     | 1.3                                      | 1.7                                      | V        |
| Maximum DC Reverse Current @T <sub>J</sub> =25°C<br>At Rated DC Blocking Voltage @T <sub>J</sub> =125°C | I <sub>R</sub>                    | 10.0<br>250                              |                                          |                                          | uA<br>uA |
| Maximum Reverse Recovery Time (Note 1)                                                                  | T <sub>rr</sub>                   | 35                                       |                                          |                                          | nS       |
| Typical junction Capacitance (Note 2)                                                                   | C <sub>J</sub>                    | 90                                       |                                          |                                          | pF       |
| Typical Thermal Resistance (Note 3)                                                                     | R <sub>θJC</sub>                  | 2.2                                      |                                          |                                          | °CW      |
| Operating Junction and Storage Temperature Range                                                        | T <sub>J</sub> , T <sub>STG</sub> | -55 to + 150                             |                                          |                                          | °C       |

NOTES : (1) Reverse recovery test conditions I<sub>F</sub> = 0.5A, R = 1.0A, I<sub>rr</sub> = 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

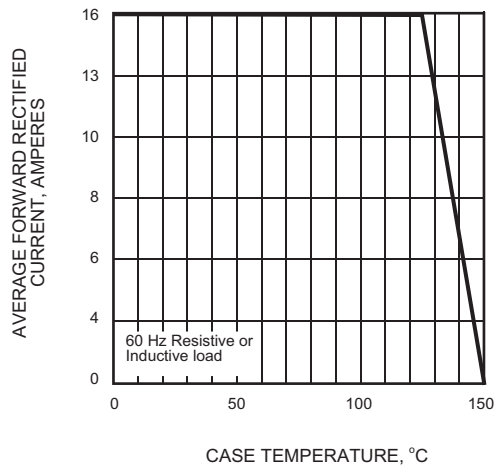


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

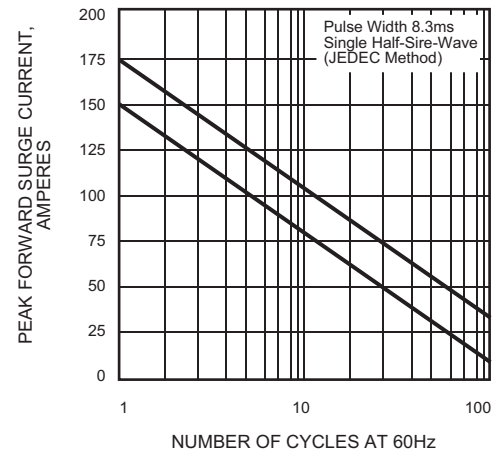


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

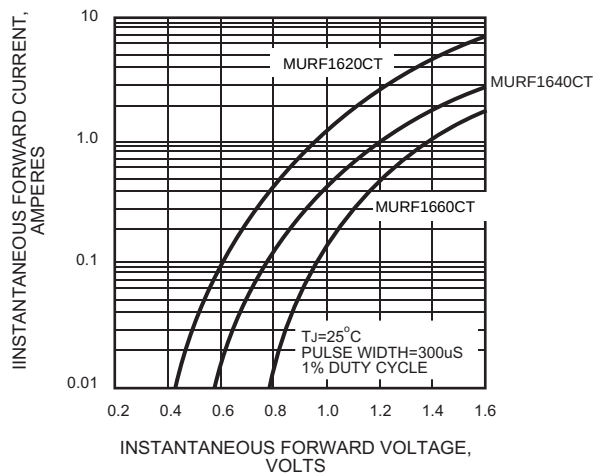


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

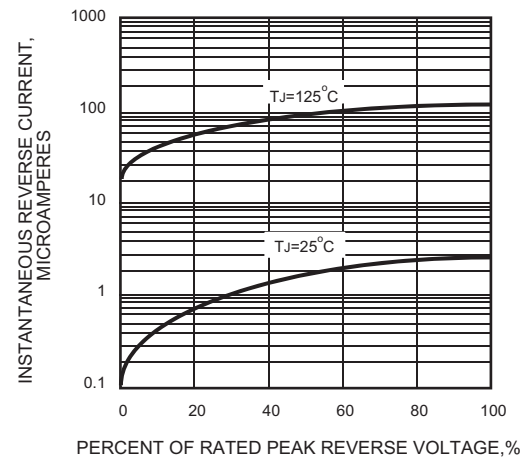


FIG.5 - TYPICAL JUNCTION CAPACITANCE

