

# MUR1620CT THRU MUR1660CT

## GLASS PASSIVATED SUPER FAST RECTIFIER

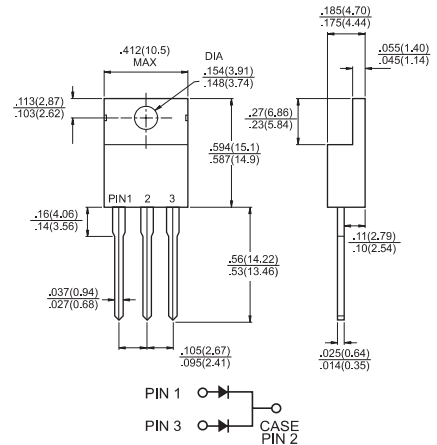
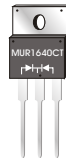
Reverse Voltage - 200 -600 Volts Forward Current - 16.0Amperes



### TO-220AB

### Features

- ✦ Ultrafast 35 and 60 Nanosecond Recovery times
- ✦ 175°C operating Junction Temperature
- ✦ Popular TO-220 Package
- ✦ Epoxy meets UL94, V0 @ 1/8"
- ✦ High temperature glass passivated junction
- ✦ High voltage capability to 600 volts
- ✦ Low leakage specified @ 150°C case temperature
- ✦ Current derating @ both case and ambient temperatures



Dimensions in inches and (millimeters)

### Mechanical Data

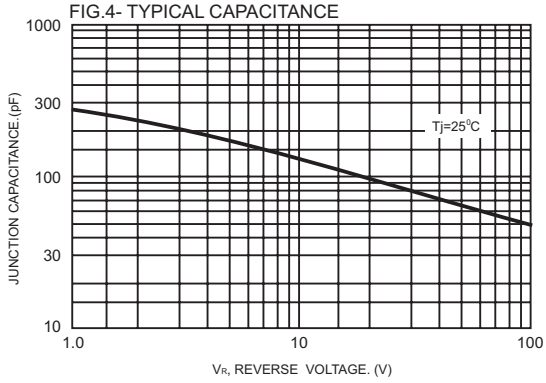
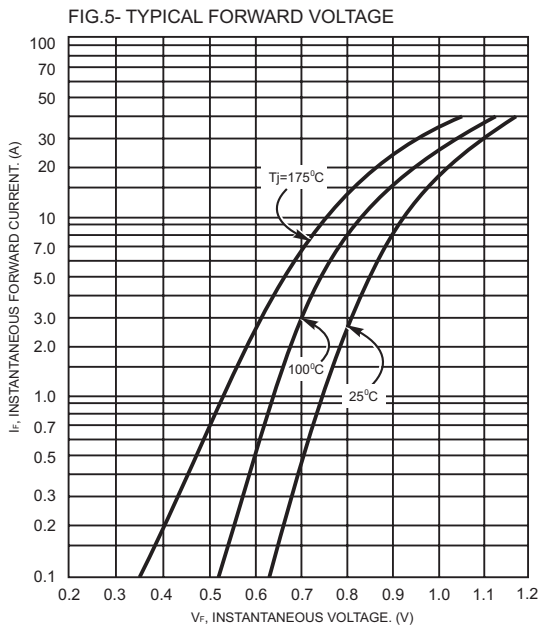
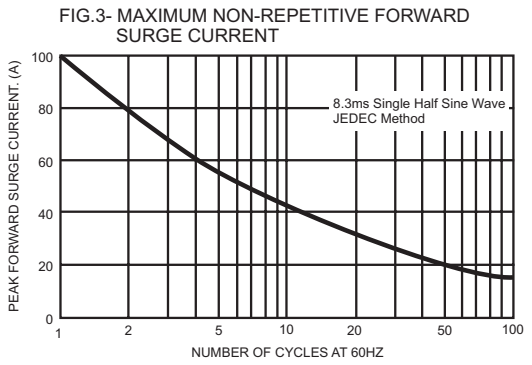
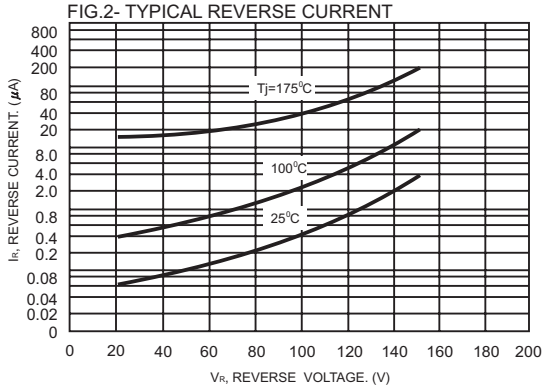
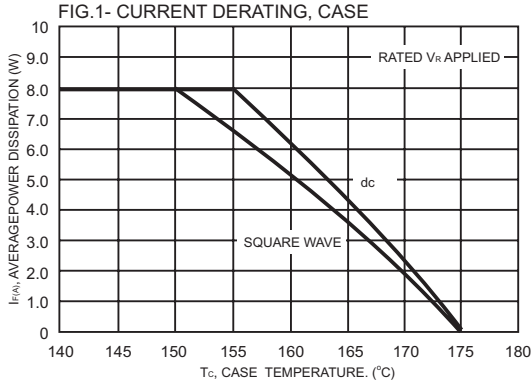
- ✦ Case: Epoxy, molded
- ✦ Terminal : Pure tin plated, lead free
- ✦ Lead temperature for soldering purposes: 260°C Max. for 10 seconds
- ✦ Finish: all external surfaces corrosion resistant and terminal leads are readily solderable
- ✦ Shipped 50 units per plastic tube
- ✦ Weight: 1.9 grams (approximately)

### MAXIMUM RATINGS

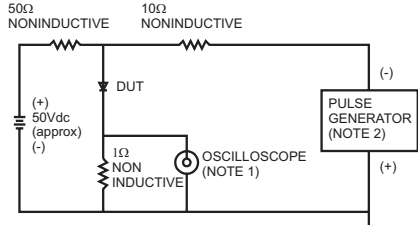
| Type Number   | Symbol          | MUR 1620CT     | MUR 1640CT   | MUR 1660CT   | Units                          |
|---|-----------------|----------------|--------------|--------------|--------------------------------|
| Peak Repetitive Reverse Voltage   | $V_{RRM}$       |                |              |              |                                |
| Working Peak Reverse Voltage  | $V_{RWM}$       | 200            | 400          | 600          | V                              |
| DC Blocking Voltage   | $V_R$           |                |              |              |                                |
| Average Rectified Forward Current<br>Total Device, (Rated $V_R$ ), $T_c=150^\circ\text{C}$<br>Total Device                          | $I_{F(AV)}$     |                | 8.0<br>16    |              | Amps                           |
| Peak Rectified Forward Current<br>(Rated $V_R$ , Square Wave, 20 KHz), $T_c=150^\circ\text{C}$<br>Per Diode Leg                     | $I_{FM}$        |                | 16           |              | Amps                           |
| Nonrepetitive Peak Surge Current<br>(Surge Applied at Rated Load Conditions<br>Halfwave, Single Phase, 60 Hz)                       | $I_{FSM}$       |                | 100          |              | Amps                           |
| Operating Junction Temperature and Storage Temperature  | $T_J, T_{STG}$  |                | -65 to + 175 |              | $^\circ\text{C}$               |
| Maximum Thermal Resistance, Junction to Case  | $R_{\theta JC}$ | 3.0            | 2.0          |              | $^\circ\text{C} / \text{W}$    |
| Maximum Instantaneous Forward Voltage<br>(Note 1) (IF=8.0 Amps, $T_c=25^\circ\text{C}$ )<br>(IF=8.0 Amps, $T_c=150^\circ\text{C}$ ) | VF              | 0.975<br>0.895 | 1.30<br>1.30 | 1.50<br>1.20 | V                              |
| Maximum Instantaneous Reverse Current<br>at Rated DC Blocking Voltage @ $T_A=25^\circ\text{C}$<br>@ $T_A=125^\circ\text{C}$         | IR              | 5.0<br>250     | 10<br>500    |              | $\mu\text{A}$<br>$\mu\text{A}$ |
| Maximum Reverse Recovery Time<br>(IF=1.0 Amp, di/dt = 50 Amps / us)<br>(IF=0.5 Amp, IR=1.0 Amp, IREC=0.25 Amp)                      | trr             | 35<br>25       | 60<br>50     |              | nS                             |

Note: 1. Pulse Test: Pulse Width = 300 us, Duty Cycle  $\leq 2.0\%$ .

# RATINGS AND CHARACTERISTIC CURVES (MUR1620CT THRU MUR1660CT)



**FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf  
 2. Rise Time=10ns max. Source Impedance= 50 ohms

