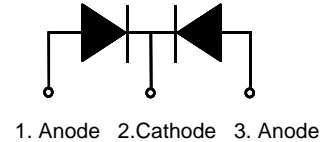
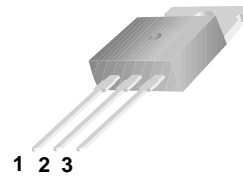


# MUR1010CT - 60CT

## Features

- High Surge Capability
- Low Forward Voltage Drop
- High Current Capability
- Super Fast Switching Speed For High Efficiency



TO-220

### MAXIMUM RATINGS MUR1010CT, MUR1015CT, MUR1020CT, MUR1040CT, MUR1060CT

Rating	Symbol	MUR10					Unit
		10CT	15CT	20CT	40CT	60CT	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	100	150	200	400	600	V
Average Rectified Forward Current Total Device, (Rated $V_R$ ), $T_C = 150^\circ\text{C}$	$I_{F(AV)}$ Per Leg Total Device	5.0 10					A
Peak Rectified Forward Current (Rated $V_R$ , Square Wave, 20 kHz), $T_C = 150^\circ\text{C}$	$I_{FM}$ Per Diode Leg	10					A
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	$I_{FSM}$	100					A
Operating Junction Temperature and Storage Temperature	$T_J, T_{stg}$	-65 to +175					$^\circ\text{C}$

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

### THERMAL CHARACTERISTICS (Per Diode Leg)

Parameter	Symbol	Value		Unit
Maximum Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	3.0	2.0	$^\circ\text{C/W}$

### ELECTRICAL CHARACTERISTICS (Per Diode Leg)

Characteristic	Symbol	1020	1040	1060	Unit
Maximum Instantaneous Forward Voltage (Note 1) ( $I_F = 8.0\text{ A}$ , $T_C = 150^\circ\text{C}$ ) ( $I_F = 8.0\text{ A}$ , $T_C = 25^\circ\text{C}$ )	$V_F$	0.895 0.975	1.20 1.50	1.50 1.80	V
Maximum Instantaneous Reverse Current (Note 1) (Rated DC Voltage, $T_C = 150^\circ\text{C}$ ) (Rated DC Voltage, $T_C = 25^\circ\text{C}$ )	$I_R$	250 5.0	500 10		$\mu\text{A}$
Maximum Reverse Recovery Time ( $I_F = 1.0\text{ A}$ , $di/dt = 50\text{ A}/\mu\text{s}$ ) ( $I_F = 0.5\text{ A}$ , $I_R = 1.0\text{ A}$ , $I_{REC} = 0.25\text{ A}$ )	$t_{rr}$	35 25	35 30		ns

1. Pulse Test: Pulse Width = 300  $\mu\text{s}$ , Duty Cycle  $\leq 2.0\%$

# Typical Characteristics

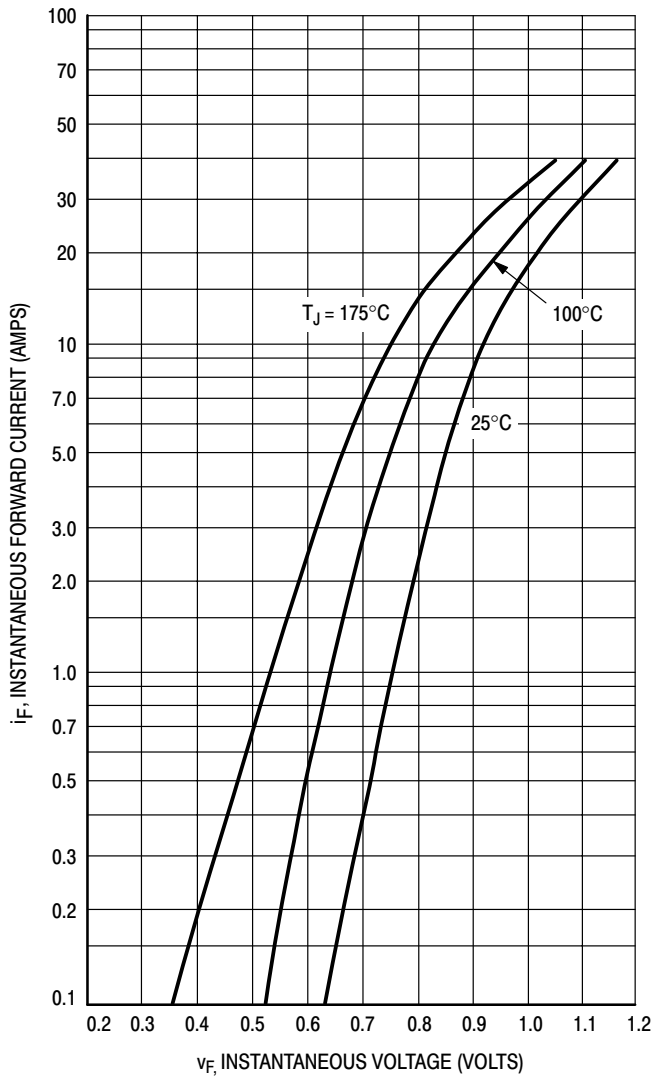


Figure 1. Typical Forward Voltage, Per Leg

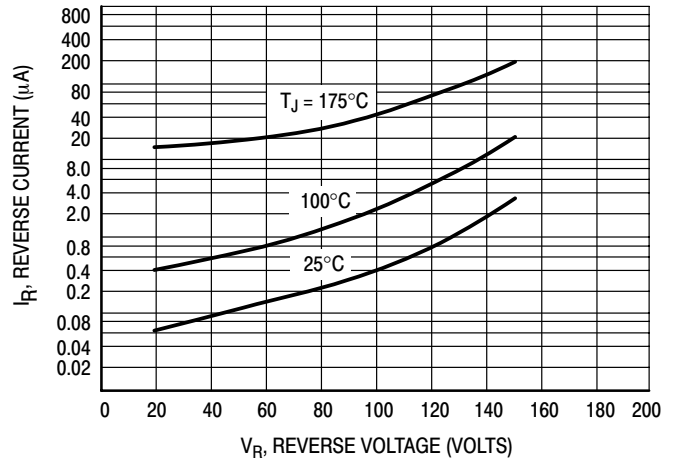


Figure 2. Typical Reverse Current, Per Leg\*

\* The curves shown are typical for the highest voltage device in the voltage grouping. Typical reverse current for lower voltage selections can be estimated from these same curves if  $V_R$  is sufficiently below rated  $V_R$ .

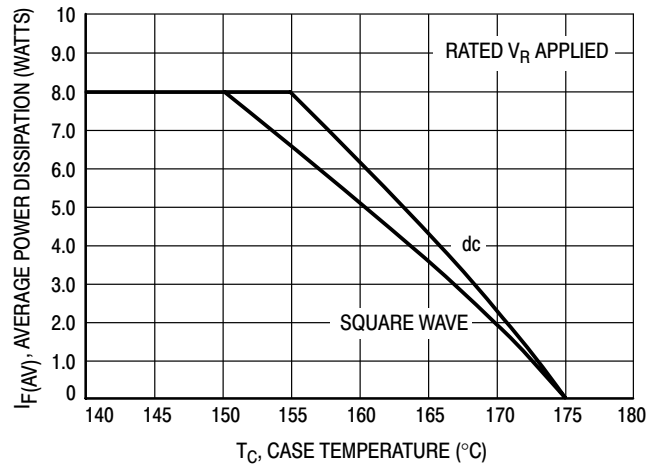


Figure 3. Current Derating, Case, Per Leg

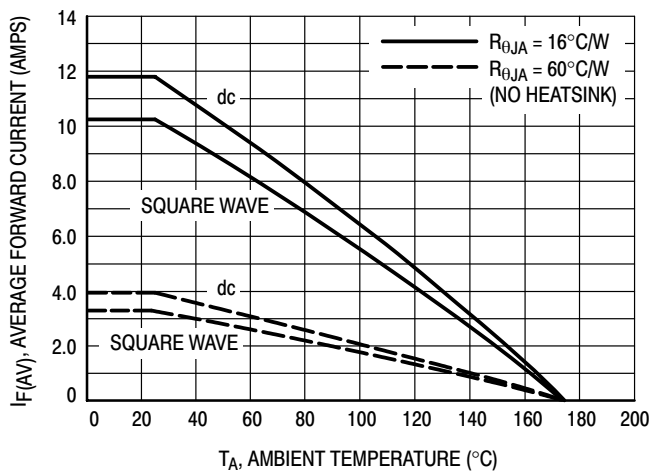


Figure 4. Current Derating, Ambient, Per Leg

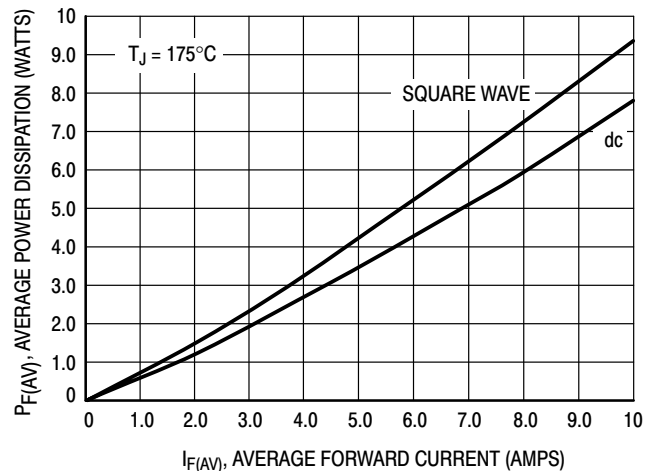
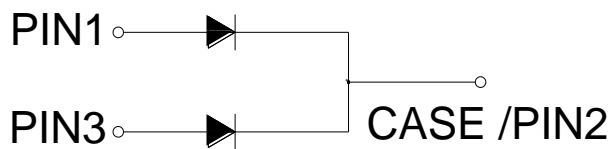
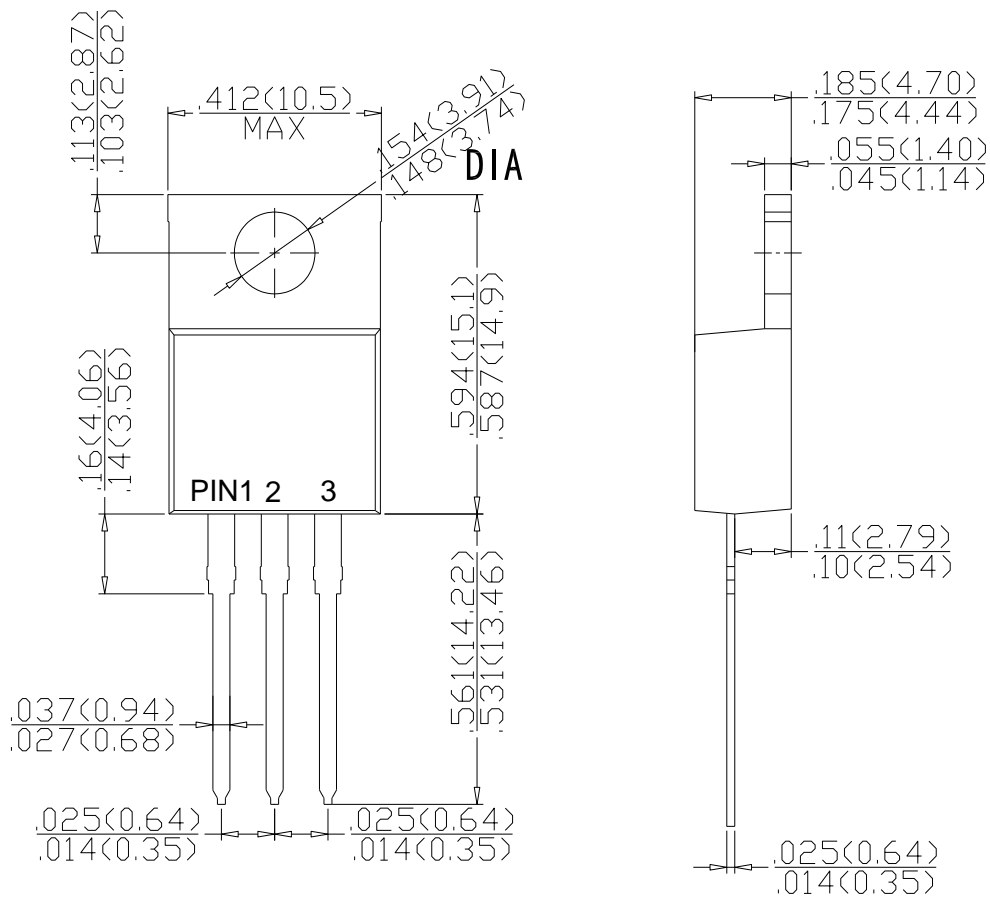


Figure 5. Power Dissipation, Per Leg

**Package Dimension**

TO-220

Unit: mm



Dimensions in inches and (millimeters)