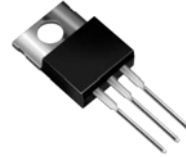


# MUR1005CT thru MUR1040CT

Glass Passivated Super Fast Rectifiers  
Reverse Voltage 50 to 400 Volts Forward Current 10.0 Amperes

## Features

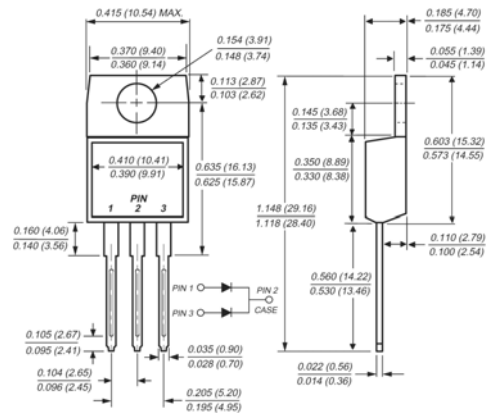
- ◆ Low power loss, high efficiency
- ◆ Low forward voltage, high current capability
- ◆ High surge capacity
- ◆ Super fast recovery times, high voltage



TO-220AB

## Mechanical Data

- ◆ Case: TO-220AB full molded plastic package
- ◆ Terminals: Lead solderable per MIL-STD-202, Method 208
- ◆ Polarity: As marked
- ◆ Standard packaging: Any
- ◆ Weight: 0.08 ounces, 2.24 grams



## Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

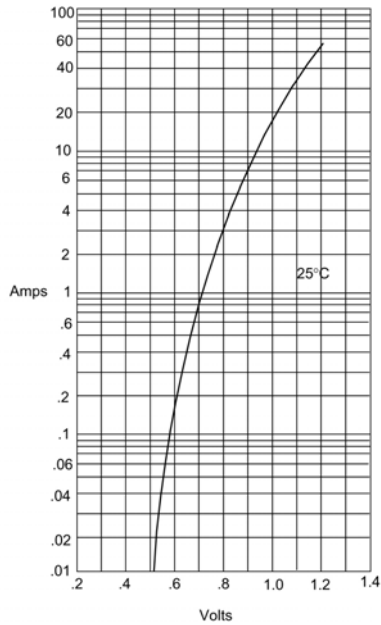
Parameter	Symbol	MUR 1005CT	MUR 1010CT	MUR 1015CT	MUR 1020CT	MUR 1030CT	MUR 1040CT	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	210	280	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	300	400	Volts
Maximum average forward rectified current at $T_C=100^\circ\text{C}$	$I_{F(AV)}$	10.0						Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150.0						Amps
Maximum instantaneous forward voltage at 5.0A per element	$V_F$	0.95				1.3		Volts
Maximum DC reverse current at rated DC blocking voltage @ $T_C=25^\circ\text{C}$ @ $T_C=100^\circ\text{C}$	$I_R$	10.0				500		$\mu\text{A}$
Maximum reverse recovery time at $I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_T=0.25\text{A}$	$t_{rr}$	35				50		nS
Typical junction capacitance at 4.0V, 1MHz	$C_J$	62						pF
Typical thermal resistance	$R_{\theta JC}$	3.0						$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150						$^\circ\text{C}$

Notes: 1. Pulse test: Pulse width 300 usec, Duty cycle 2%

# RATINGS AND CHARACTERISTIC CURVES

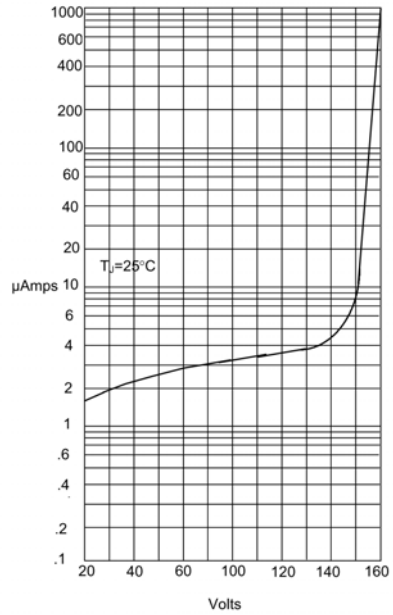
( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Figure 1  
Typical Forward Characteristics



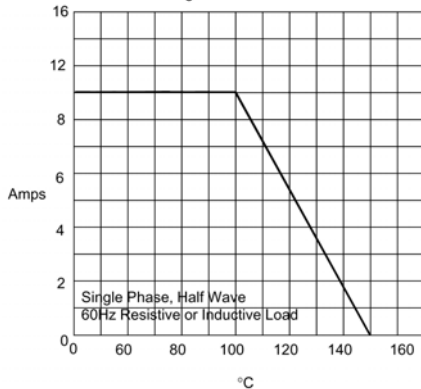
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Typical Reverse Characteristics



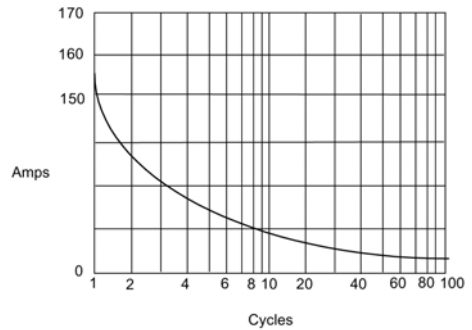
Instantaneous Reverse Leakage Current - MicroAmperes versus  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3  
Forward Derating Curve



Average Forward Rectified Current - Amperes versus  
Case Temperature - °C

Figure 4  
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes versus  
Number Of Cycles At 60Hz - Cycles