

Pb Free Plating Product

# MUR1505 thru MUR1560



15.0 Ampere Glass Passivated Chip Ultrafast Recovery Rectifier Diodes

### Features

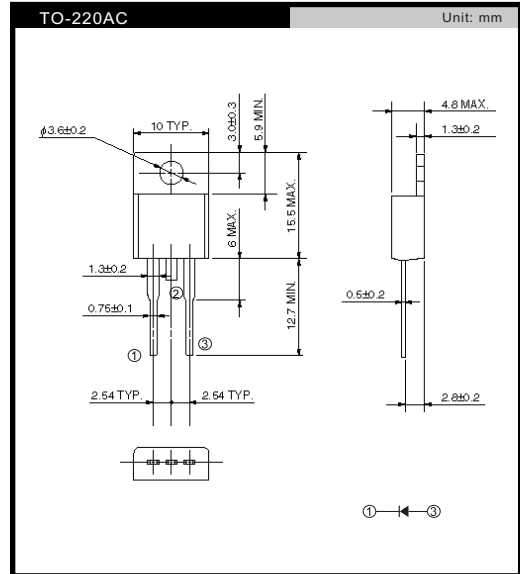
- ◆ Glass passivated junction
- ◆ Superfast recovery time for high efficiency
- ◆ Low reverse leakage current
- ◆ High surge capacity

### Mechanical Data

- ◆ Case: TO-220AC 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



TO-220AC Heatsink



## Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

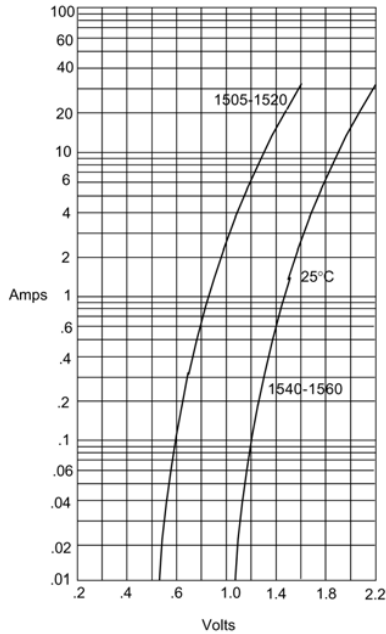
Parameter	Symbol	MUR1505	MUR1510	MUR1520	MU1540	MUR1560	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	Volts
Maximum average forward rectified current at $T_C=100^\circ\text{C}$	$I_{F(AV)}$	15.0					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 15.0A	$V_F$	1.25		2.0			Volts
Maximum DC reverse current at rated DC blocking voltage @ $T_J=25^\circ\text{C}$ @ $T_J=100^\circ\text{C}$	$I_R$	10.0		500			$\mu\text{A}$
Maximum reverse recovery time at $I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_S=0.25\text{A}$	$t_{rr}$	35		60			nS
Typical junction capacitance at 4.0V, 1MHz	$C_J$	160					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

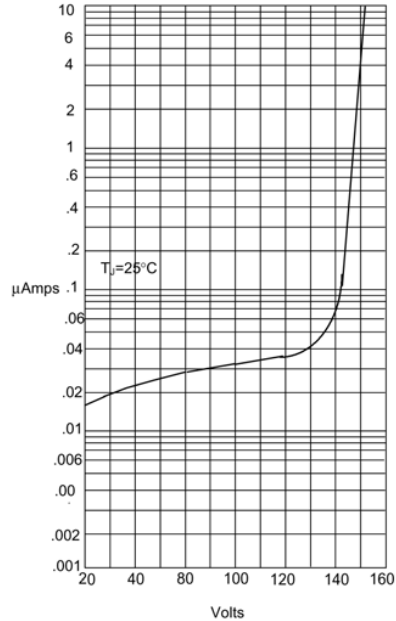
( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Figure 1  
Typical Forward Characteristics



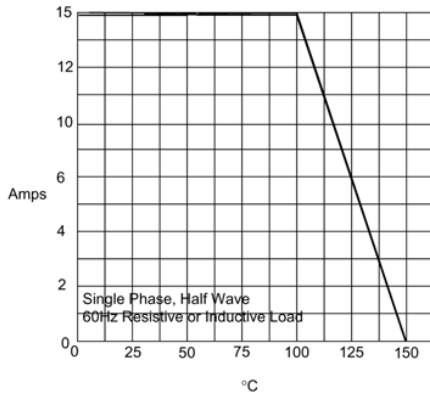
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Typical Reverse Characteristics



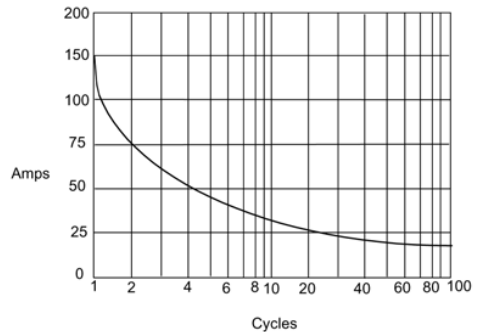
Instantaneous Reverse Leakage Current - MicroAmperes versus  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3  
Forward Derating Curve



Average Forward Rectified Current - Amperes versus  
Case Temperature -  $^\circ\text{C}$

Figure 4  
Maximum Non-Repetitive Forward Surge Current



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