

# MUR1560/MUR1560F

Ultrafast Recovery Rectifiers  
 Reverse Voltage 600V Forward Current 15 A

## Features

- FRED (Planar) wafer construction
- Ultrafast recovery time
- Low forward voltage drop, low power loss
- High efficiency
- Plastic package has underwriters Laboratory Flammability Classification 94V-0



**MUR1560**  
 Package: TO-220-AC



**MUR1560F**  
 Package: ITO-220-AC

## Mechanical Data

- Case: Epoxy, molded
- Weight: 1.9grams (approximately)
- Finish: all external surfaces corrosion resistant and terminal leads readily solderable
- Lead temperature for soldering purposes: 260°C Max. for 10 sec
- 50 units per plastic tube



**Schematic Diagram**

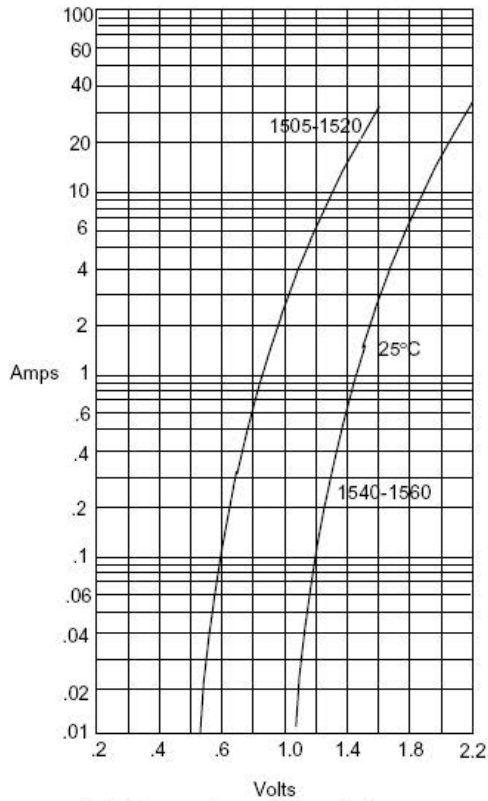
## Maximum Ratings & Electrical Characteristics

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

Parameter	Test Conditions		Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage			$V_{RRM}$	600	V
Working Peak Reverse Voltage			$V_{RWM}$	600	V
Maximum DC Blocking Voltage			$V_{DC}$	600	V
Maximum Average Forward Rectified Current @ $T_c=105^\circ\text{C}$ Total Device per Diode			$I_{F(AV)}$	15	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load per Diode			$I_{FSM}$	150	A
Voltage Rate of Change (rated $V_R$ )			$DV/dt$	10000	V/ $\mu\text{s}$
Operating Junction Temperature Range			$T_J$	- 55 to+150	$^\circ\text{C}$
Storage Temperature Range			$T_{STG}$	- 55 to+150	$^\circ\text{C}$
Maximum Reverse Recover Time ( $I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_{rec}=0.25\text{A}$ )			$T_{rr}$	50	ns
Maximum Instantaneous Forward Voltage per Leg	$I_F=15\text{A}$	$T_c=25^\circ\text{C}$	$V_F$	1.90	V
	$I_F=15\text{A}$	$T_c=125^\circ\text{C}$		1.80	
Maximum Reverse Current per Leg at Working Peak Reverse Voltage		$T_J=25^\circ\text{C}$	$I_R$	10	$\mu\text{A}$
		$T_J=100^\circ\text{C}$		500	$\mu\text{A}$
<b>Thermal Characteristics <math>T_A=25^\circ\text{C}</math> unless otherwise noted</b>					
Symbol	Parameter		Typ.(MUR1560)	Typ.(MUR1560F)	Unit
$R_{\theta JC}$	Thermal Resistance, Junction to Case per Leg		2.0	4.0	$^\circ\text{C/W}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient per Leg		62.5	62.5	$^\circ\text{C/W}$

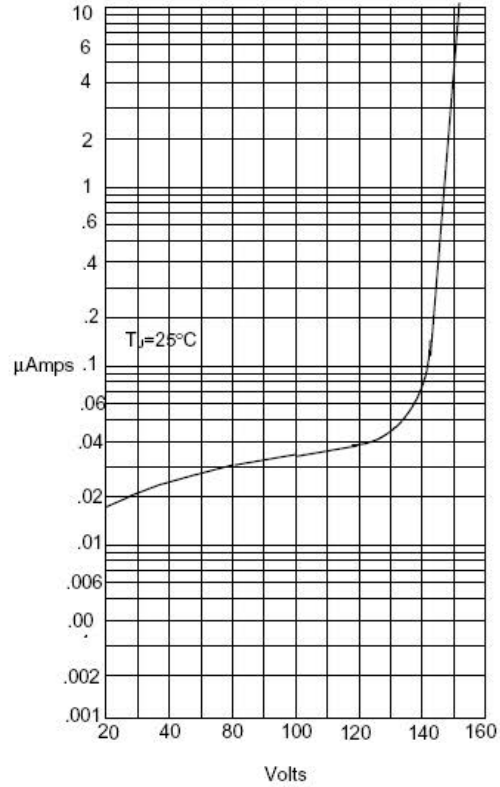
**Note:** Pulse test:300us pulse width, duty cycle=2%

## Ratings and Characteristics Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)



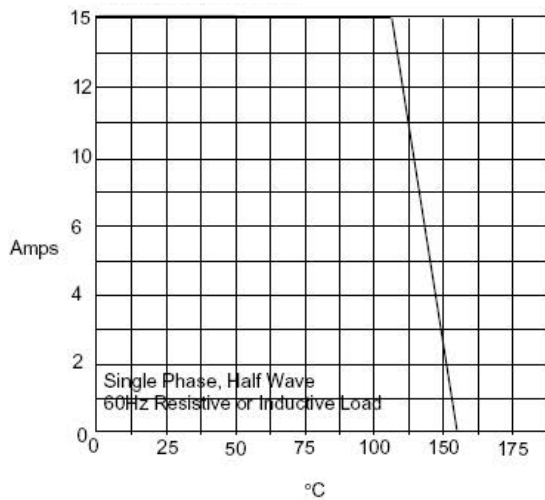
Instantaneous Forward Current - Amperes versus Instantaneous Forward Voltage - Volts

**Figure 1. Typical Forward Voltage**



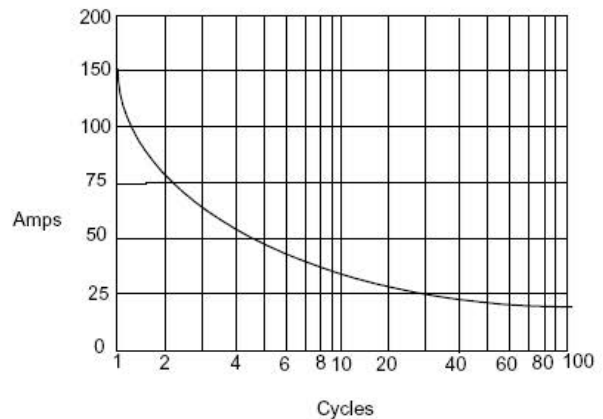
Instantaneous Reverse Leakage Current - MicroAmperes versus Percent Of Rated Peak Reverse Voltage - Volts

**Figure 2. Typical Reverse Current**



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

**Figure 3. Forward Derating Curve**



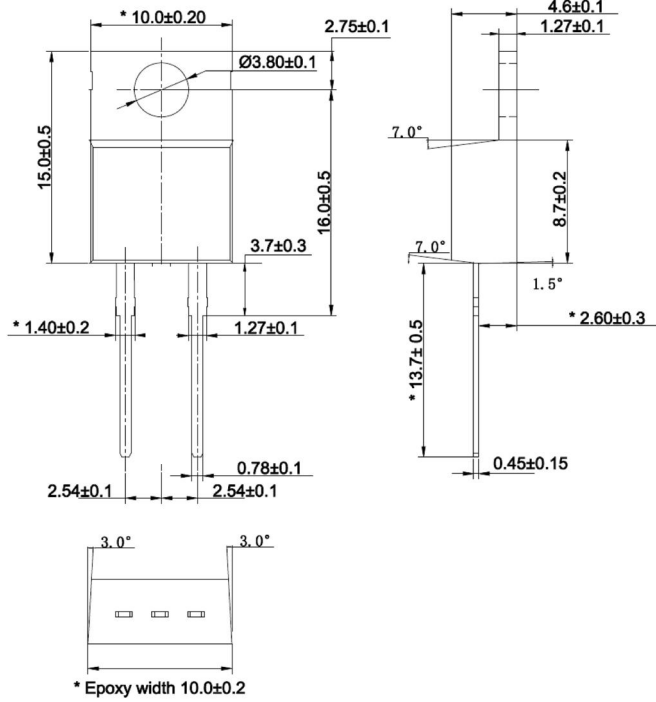
Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles

**Figure 4. Non-Repetitive Forward Surge Current**

## Package Outline Dimensions

in millimeters

**TO-220-AC**



**ITO-220-AC**

