



THE DATASHEET OF MUR1560



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

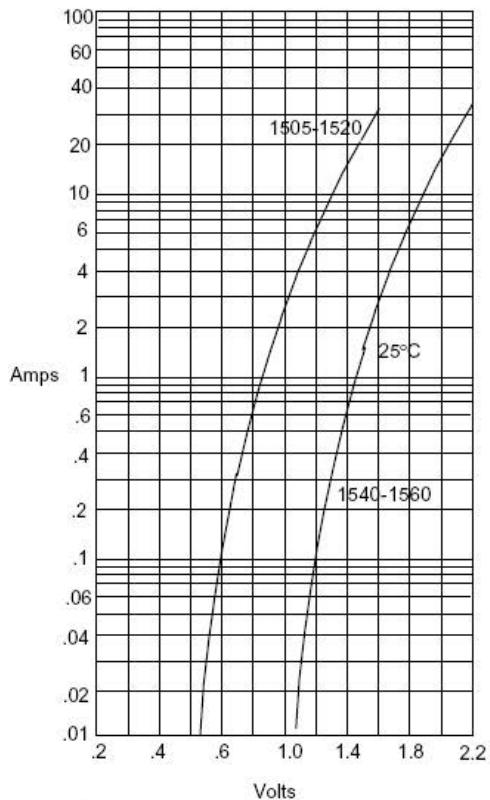
Maximum Ratings & Electrical Characteristics

($T_A=25^\circ\text{C}$ 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/ μs
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	μA
		$T_J=100^\circ\text{C}$		500	μA
Thermal Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted					
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	$^\circ\text{C/W}$

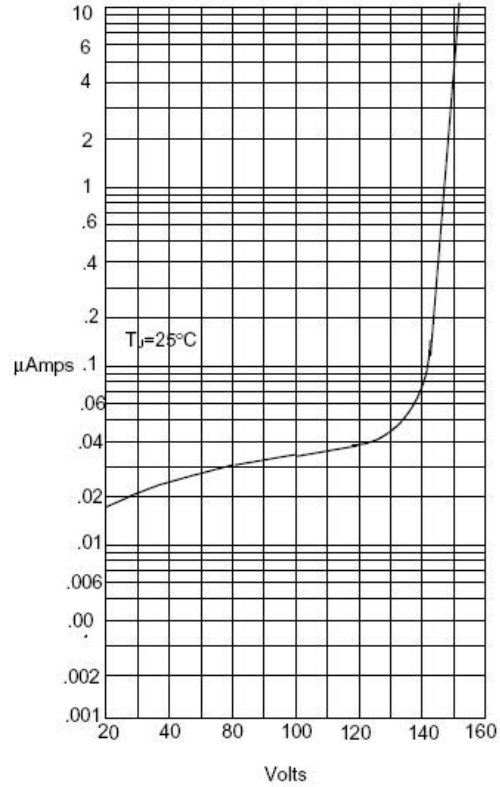
Note: Pulse test:300us pulse width, duty cycle=2%

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



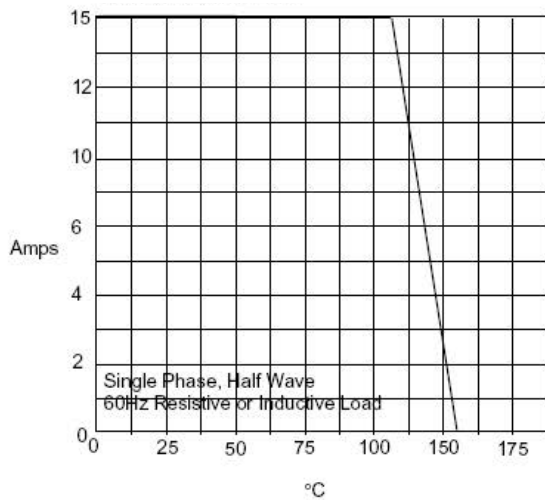
Instantaneous Forward Current - Amperes versus Instantaneous Forward Voltage - Volts

Figure 1. Typical Forward Voltage



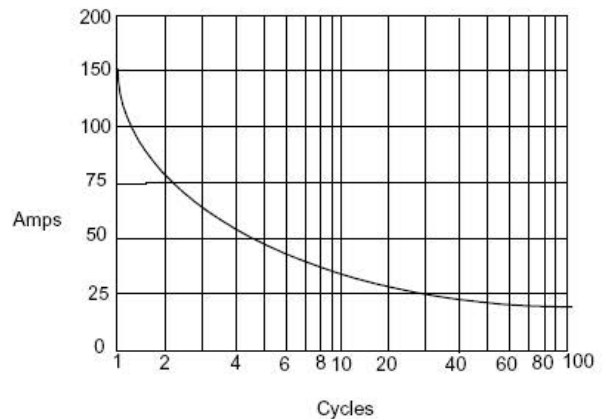
Instantaneous Reverse Leakage Current - MicroAmperes versus Percent Of Rated Peak Reverse Voltage - Volts

Figure 2. Typical Reverse Current



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

Figure 3. Forward Derating Curve



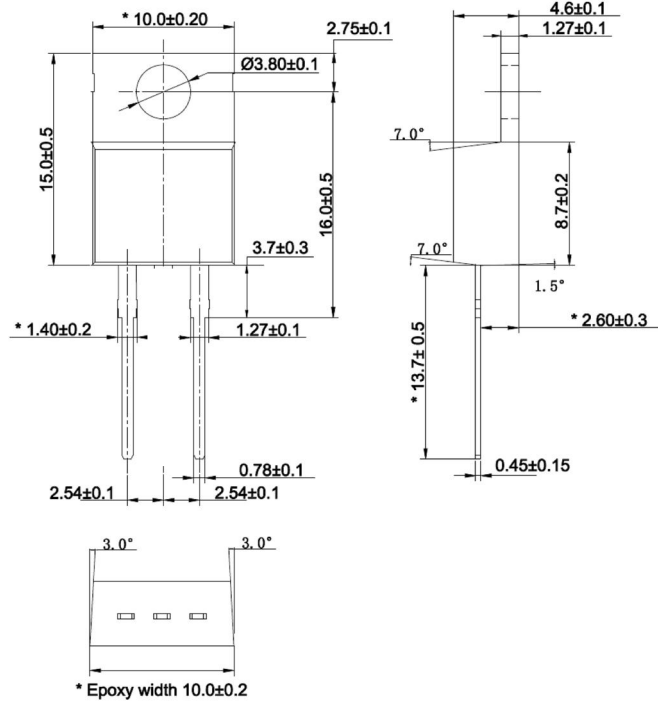
Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles

Figure 4. Non-Repetitive Forward Surge Current

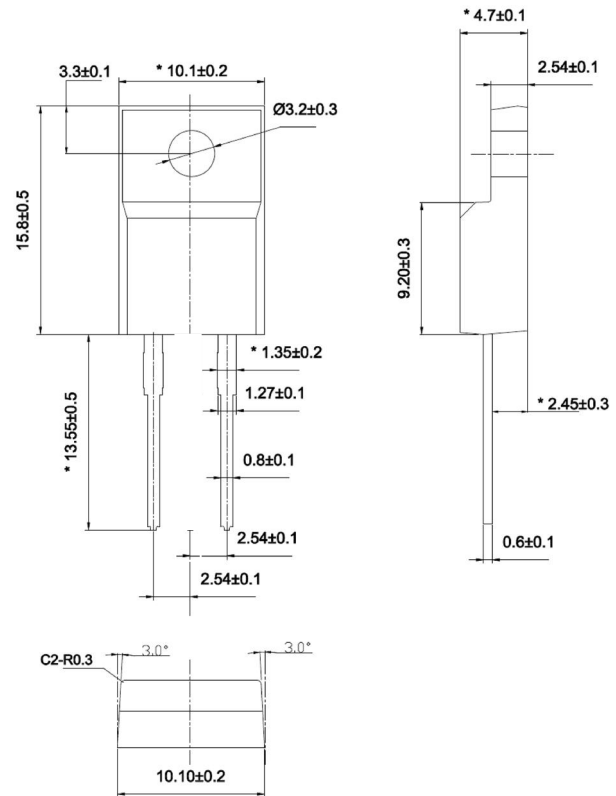
Package Outline Dimensions

in millimeters

TO-220-AC




ITO-220-AC



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