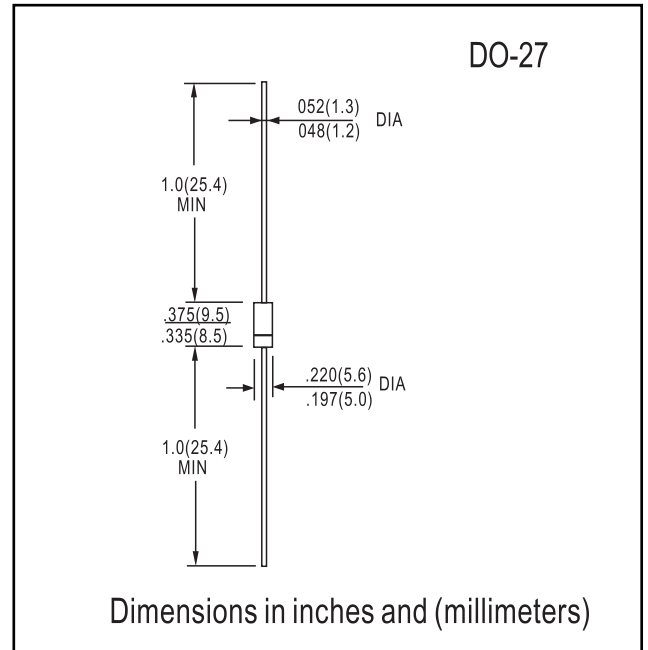


## FEATURES

- Ultrafast 25 ns, 50 ns and 75 ns Recovery Times
- 175°C Operating Junction Temperature
- Low Forward Voltage
- Low Leakage Current
- High Temperature Glass Passivated Junction
- Reverse Voltage to 600 V
- Shipped in Plastic Bags, 500 per Bag

## MECHANICAL DATA

- Case: Epoxy, Molded
- Weight: 1.1 Gram (Approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 Seconds
- Polarity: Cathode indicated by Polarity Band



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

### MAXIMUM RATINGS

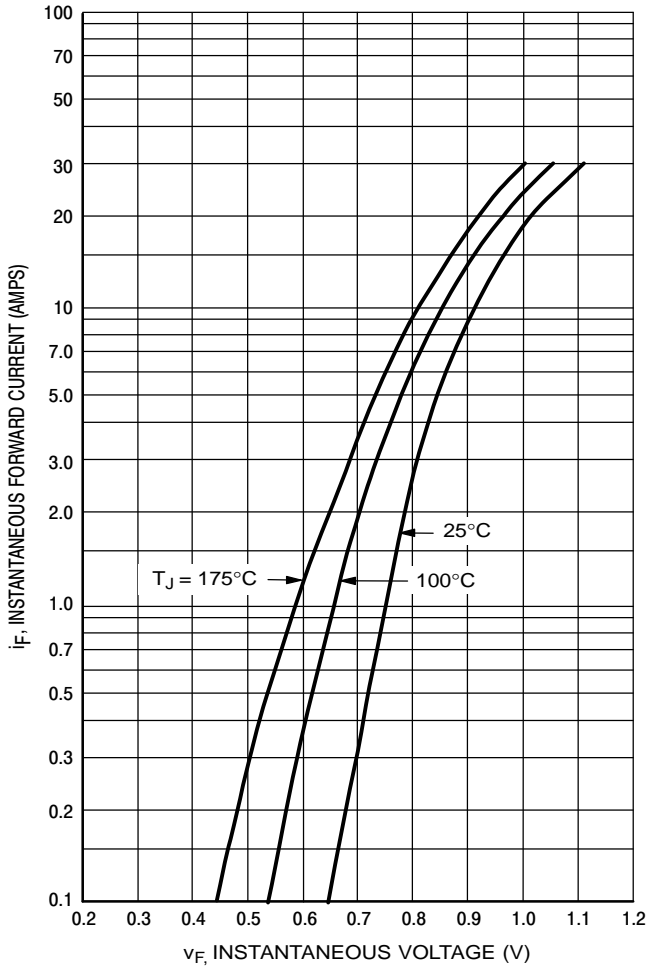
Rating	Symbol	MUR						Unit
		405	410	415	420	440	460	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	50	100	150	200	400	600	V
Average Rectified Forward Current (Square Wave) (Mounting Method #3 Per Note 2)	$I_{F(AV)}$	4.0 @ $T_A = 80^\circ\text{C}$				4.0 @ $T_A = 40^\circ\text{C}$		A
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions, half wave, single phase, 60 Hz)	$I_{FSM}$	125				110		A
Operating Junction Temperature & Storage Temperature	$T_J, T_{stg}$	-65 to +175						°C

### ELECTRICAL CHARACTERISTICS

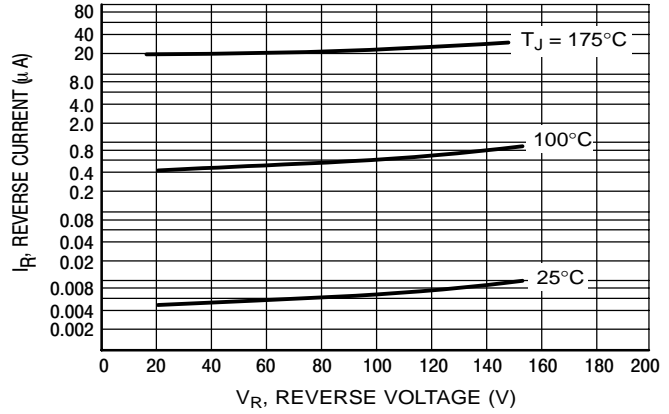
Rating	Symbol	MUR						Unit
		405	410	415	420	440	460	
Maximum Instantaneous Forward Voltage (Note 1) ( $I_F = 3.0\text{ A}, T_J = 150^\circ\text{C}$ ) ( $I_F = 3.0\text{ A}, T_J = 25^\circ\text{C}$ ) ( $I_F = 4.0\text{ A}, T_J = 25^\circ\text{C}$ )	$V_F$	0.71 0.88 0.89			1.05 1.25 1.28		V	
Maximum Instantaneous Reverse Current (Note 1) (Rated dc Voltage, $T_J = 150^\circ\text{C}$ ) (Rated dc Voltage, $T_J = 25^\circ\text{C}$ )	$i_R$	150 5			250 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			75 50		ns	
Maximum Forward Recovery Time ( $I_F = 1.0\text{ A}, di/dt = 100\text{ A}/\mu\text{s}$ , Recovery to 1.0 V)	$t_{fr}$	25			50		ns	
Controlled Avalanche Energy (Maximum)	$W_{aval}$				5		mJ	

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

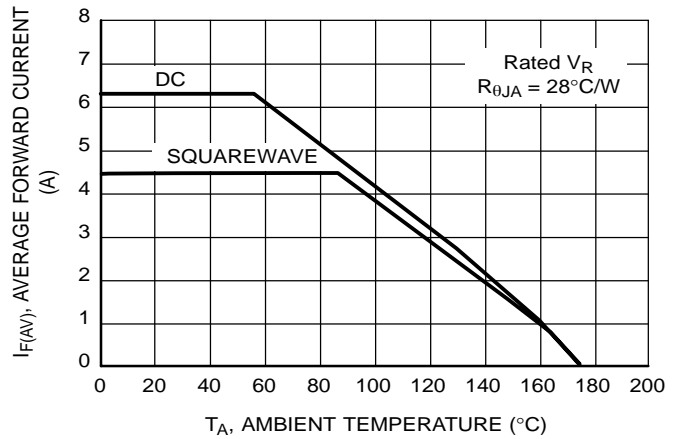
**RATINGS AND CHARACTERISTIC CURVES MUR405 MUR410 MUR415 MUR420 MUR440 MUR460**



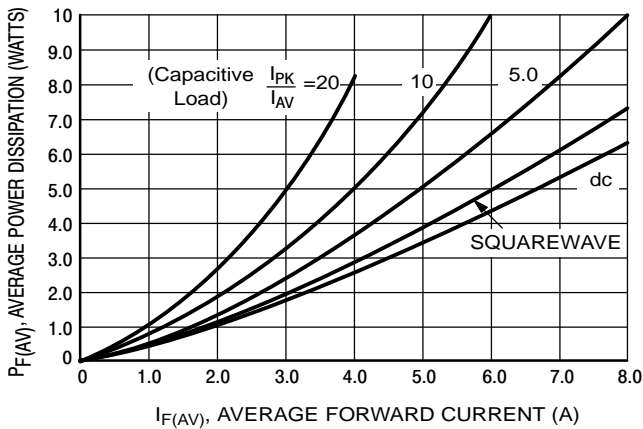
**Figure 1. Typical Forward Voltage**



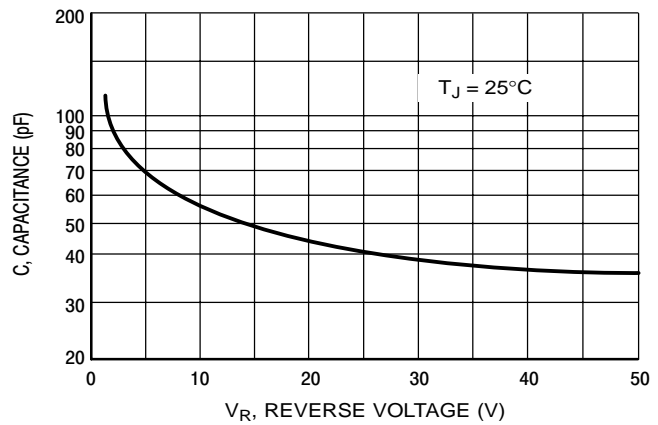
**Figure 2. Typical Reverse Current**



**Figure 3. Current Derating  
(Mounting Method #3 Per Note 2)**



**Figure 4. Power Dissipation**



**Figure 5. Typical Capacitance**