

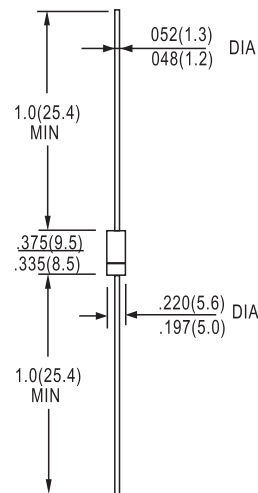
FEATURES

- 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

DO-27



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		μA	
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 μs , Duty Cycle $\leq 2.0\%$.

RATINGS AND CHARACTERISTIC CURVES MUR405 MUR410 MUR415 MUR420 MUR440 MUR460

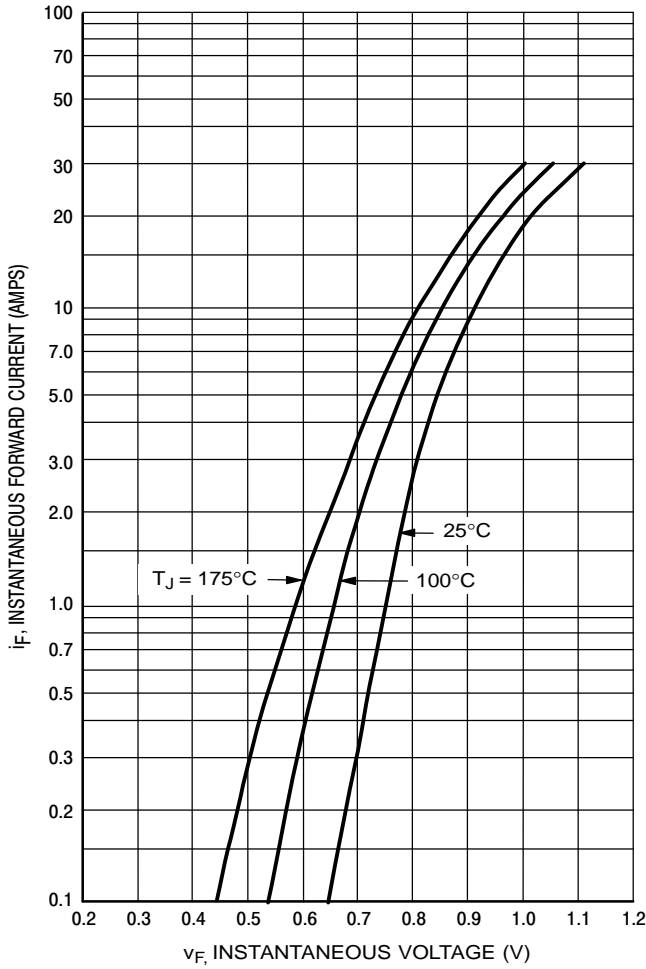


Figure 1. Typical Forward Voltage

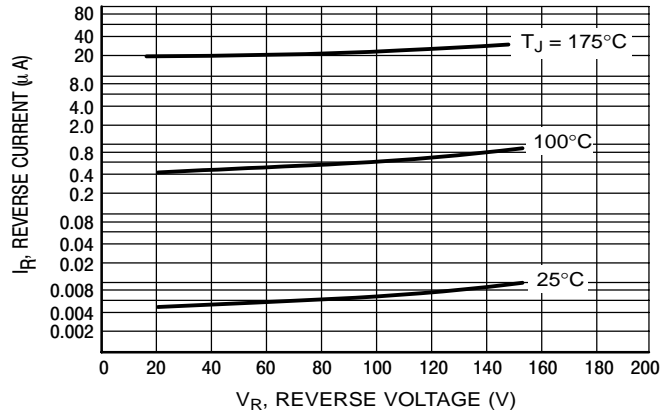
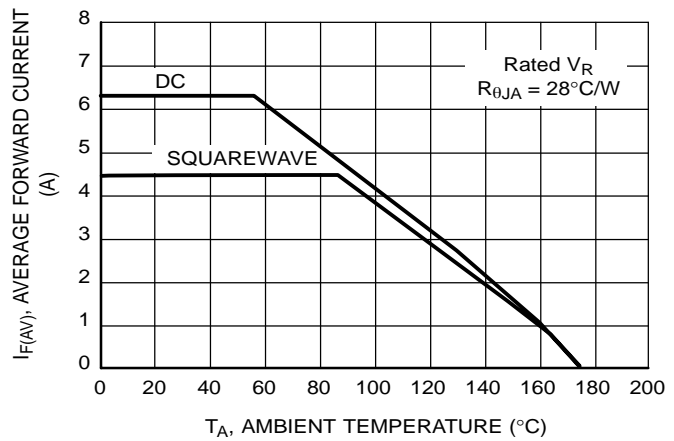


Figure 2. Typical Reverse Current



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

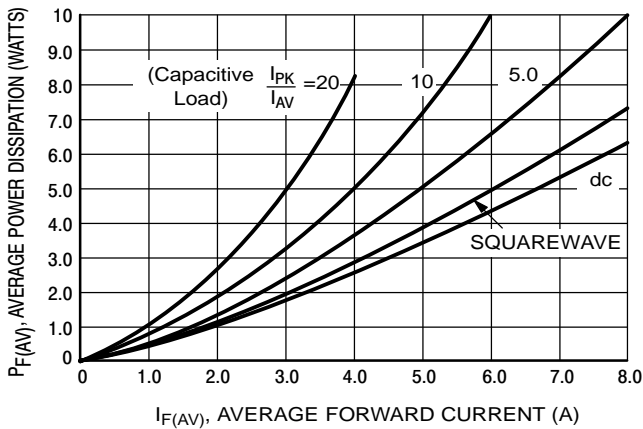


Figure 4. Power Dissipation

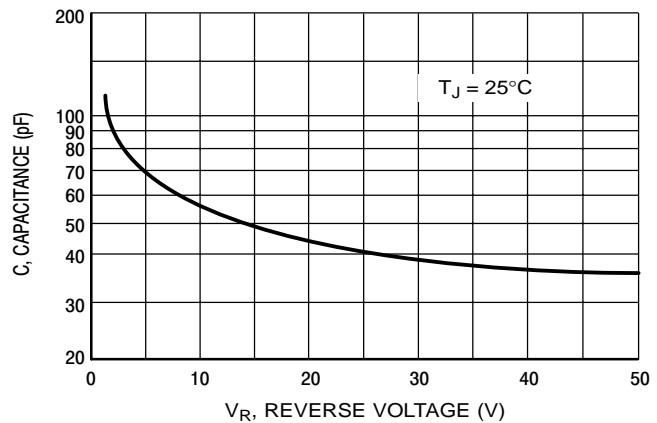


Figure 5. Typical Capacitance