

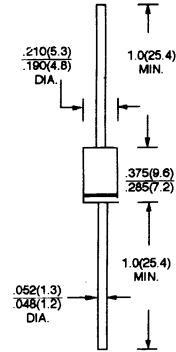


# MUR405 THRU MUR460

## 4.0 AMP. ULTRA FAST RECTIFIERS

**VOLTAGE RANGE**  
50 to 600 Volts  
**CURRENT**  
4.0 Amperes

### DO-201AD



Dimensions in inches and (millimeters)

### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability
- \* Ultra fast 25, 50 Nanosecond Recovery Times

### MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V - 0 rate flame retardant
- \* Lead and Mounting Surface Temperature for soldering Purposes 220°C Max for 10 Seconds  
1/16" from case
- \* Polarity: Color band denotes cathode end
- \* Mounting Position: Any
- \* Weight: 1.18 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

TYPE NUMBER	SYMBOLS	MUR 405	MUR 410	MUR 415	MUR 420	MUR 440	MUR 460	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	400	600	
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	280	420	V
Maximum D. C Blocking Voltage	$V_{DC}$	50	100	150	200	400	600	V
Maximum Average Forward Rectified Current See fig. 1	$I_{F(AV)}$	4.0 @ $T_A = 80^\circ C$			4.0 @ $T_A = 40^\circ C$			A
Peak Forward Surge Current, 8.3 ms single half sine - wave superimposed on rated load (JEDEC method)	$I_{FSM}$	125			70			A
Maximum Instantaneous Forward Voltage 4.0A @ $T_J = 25^\circ C$ (Note 1)	$V_F$	1.0			1.28			V
Maximum D. C Reverse Current @ $T_A = 25^\circ C$ At Rated D. C Blocking Voltage @ $T_A = 150^\circ C$	$I_R$	5.0 150			10 250			$\mu A$ $\mu A$
Maximum Reverse Recovery Time (Note 2)	$T_{RR}$	25			50			nS
Typical Junction Capacitance (Note 3)	$C_J$				65			pF
Typical Thermal Resistance Junction to Ambient (Note 4)	$R_{\theta JA}$				28			$^\circ C/W$
Operation Temperature Range	$T_J, T_{STG}$				- 65 to + 150			$^\circ C$

- NOTES: 1. Pulse test:  $t_p = 300 \mu s$ , duty cycle  $\leq 2\%$   
 2. Reverse Recovery Test Conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$ .  
 3. Measured at 1 MHz and applied reverse voltage of 4.0V D. C.  
 4. Lead length = 1/2" on P. C. Board with 1.5" x 1.5" copper surface

## RATINGS AND CHARACTERISTIC CURVES

### MUR405 THRU MUR460

FIG. 1 - FORWARD CURRENT DERATING CURVE

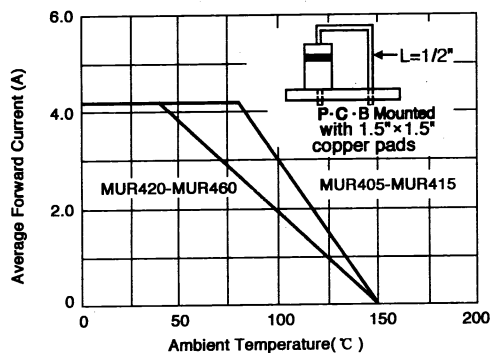


FIG. 4 - TYPICAL FORWARD VOLTAGE

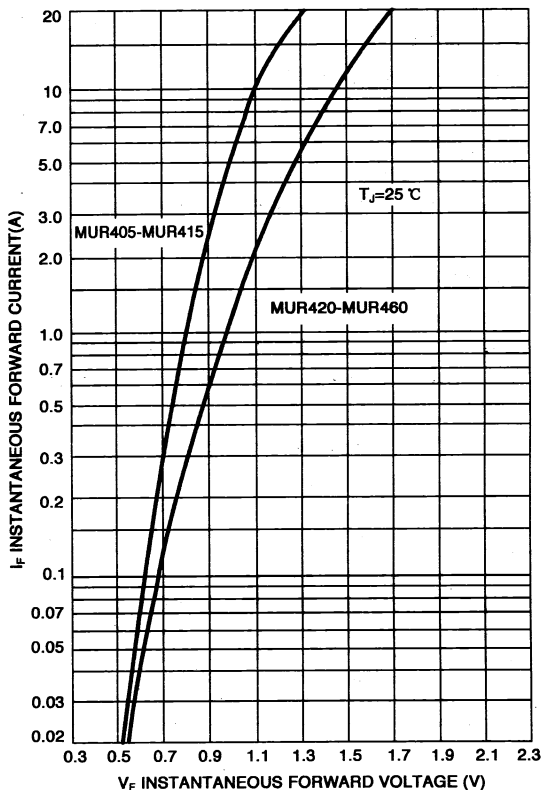


FIG. 2 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

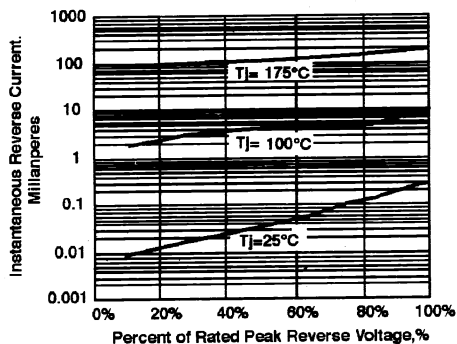


FIG. 3 - TYPICAL JUNCTION CAPACITANCE - PER LEG

