



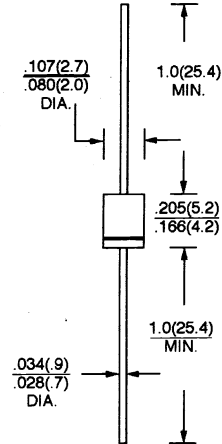
# MUR105 THRU MUR160

## 1.0 AMP. ULTRA FAST RECTIFIERS



**VOLTAGE RANGE**  
50 to 1000 Volts  
**CURRENT**  
1.0 Ampere

**DO-41**



Dimensions in inches and (millimeters)

### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability
- \* Ultra fast 25, 50, 75 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: 0.34 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 105	MUR 110	MUR 115	MUR 120	MUR 130	MUR 140	MUR 160	UNITS	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600		
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	420	V	
Maximum D. C Blocking Voltage	$V_{DC}$	105	100	150	200	300	400	600	V	
Maximum Average Forward Rectified Current See fig. 1	$I_{F(AV)}$	1.0 @ $T_A = 110^\circ C$			1.0 @ $T_A = 100^\circ C$				A	
Peak Forward Surge Current, 8.3 ms single half sine - wave superimposed on rated load (JEDEC method)	$I_{FSM}$	35								A
Maximum Instantaneous Forward Voltage 1.0A (Note 1)	$V_F$	0.975			1.25				V	
Maximum D. C Reverse Current @ $T_A = 25^\circ C$ At Rated D. C Blocking Voltage @ $T_A = 100^\circ C$	$I_R$	2.0 50			5.0 150				$\mu A$ $\mu A$	
Maximum Reverse Recovery Time (Note 2)	$T_{RR}$	25			50				nS	
Typical Junction Capacitance (Note 3)	$C_J$	25								pF
Typical Thermal Resistance Junction to Ambient (Note 4)	$R_{\theta JA}$	50								$^\circ C/W$
Operating and Storage 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 = 3/8" on P. C. Board with 1.5" x 1.5" copper surface

# RATINGS AND CHARACTERISTIC CURVES

## MUR105 THRU MUR160

FIG. 1 - FORWARD CURRENT DERATING CURVE

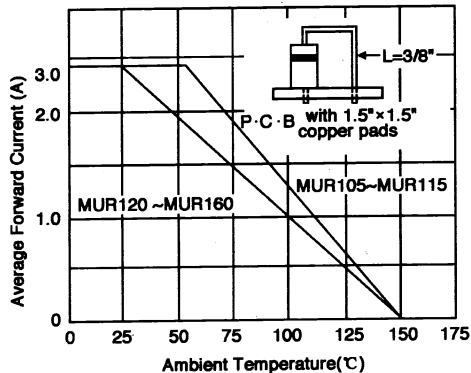


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

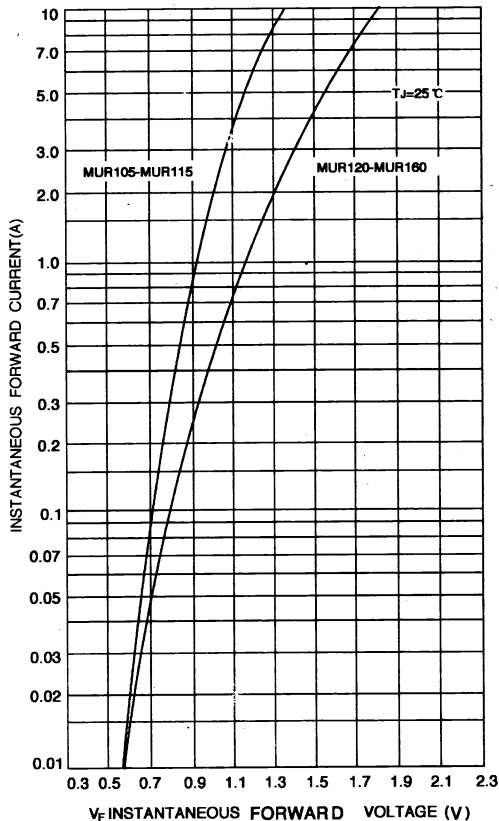


FIG. 2 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

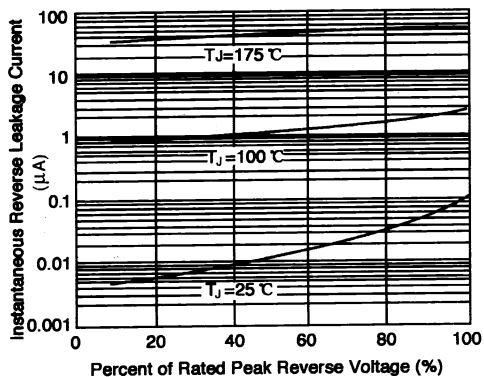


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

