



MUR105 THRU MUR160

1.0 AMP. ULTRA FAST RECTIFIERS

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

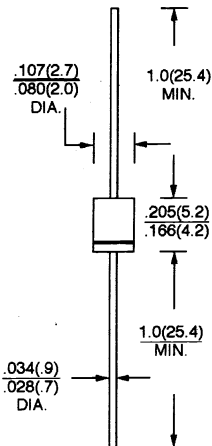
VOLTAGE RANGE

50 to 1000 Volts

CURRENT

1.0 Ampere

DO-41



Dimensions in inches and (millimeters)

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				μA μA
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: $t_p = 300\mu\text{s}$, duty cycle $\leq 2\%$

2. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.

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

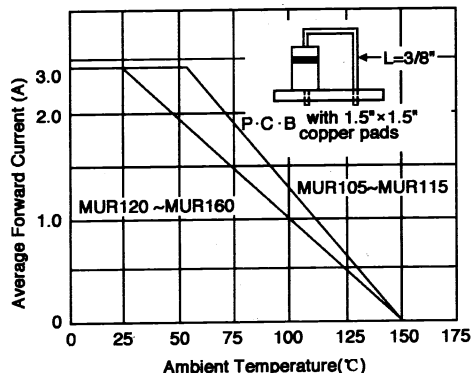


FIG. 2 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

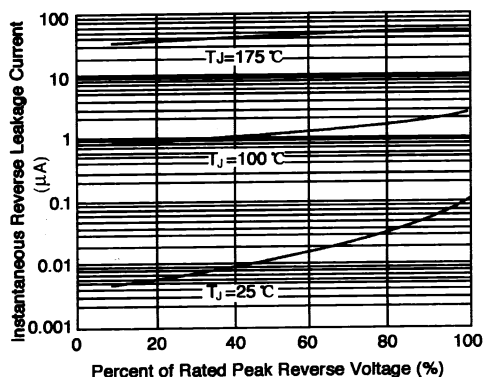


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

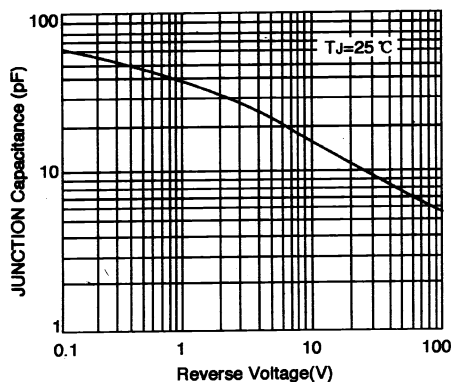


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

