



MUR105 THRU MUR160

1.0 AMP. ULTRA FAST RECTIFIERS

FEATURES

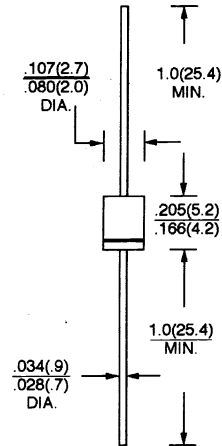
- * Low forward voltage drop
- * High current capability
- * High reliability
- * High surge current capability
- * Ultra fast 25,50,75 Nanosecond Recovery Times

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°C			1.0 @ T _A = 100°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°C At Rated D.C Blocking Voltage @ T _A = 100°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 _{θJA}	50							°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	– 65 to + 150							°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

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FIG. 1 - FORWARD CURRENT DERATING CURVE

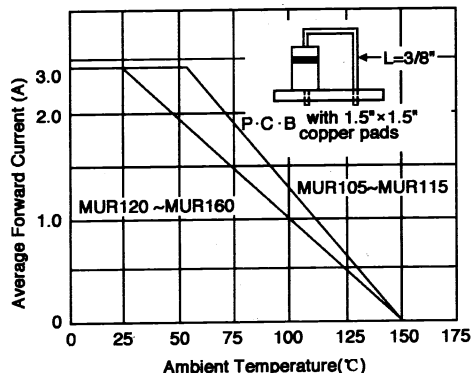


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

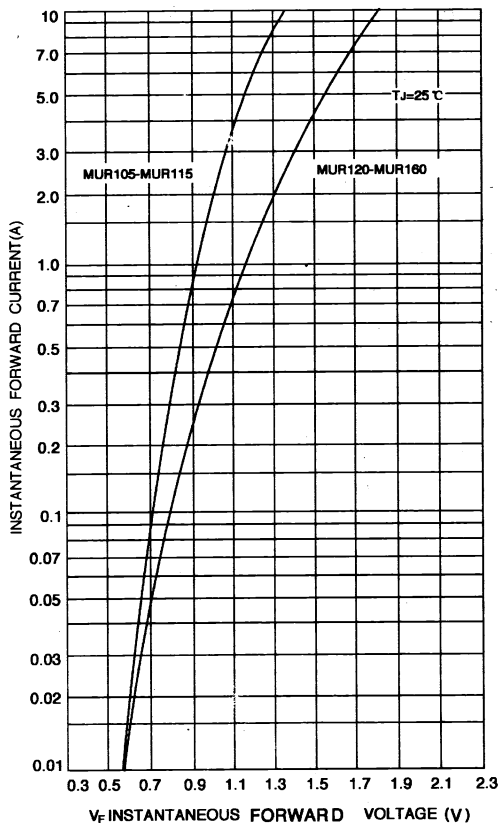


FIG. 2 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

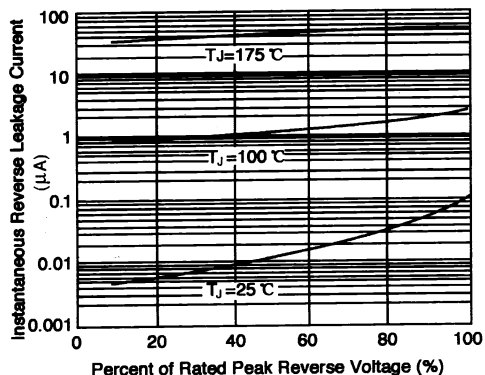


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

