



MUR105 THRU MUR160

1.0 AMP. ULTRA FAST RECTIFIERS



FEATURES

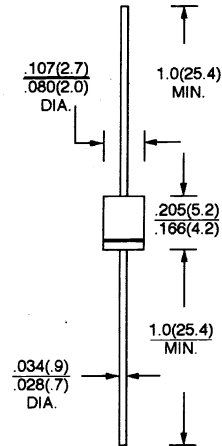
- * Low forward voltage drop
- * High current capability
- * High reliability
- * High surge current capability
- * Ultra fast 25, 50, 75 Nanosecond Recovery Times

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: $t_p = 300 \mu s$, 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

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FIG. 1 - FORWARD CURRENT DERATING CURVE

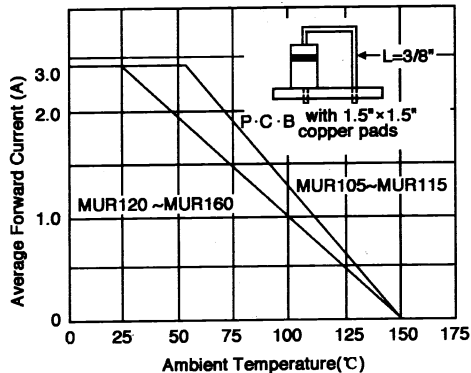


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

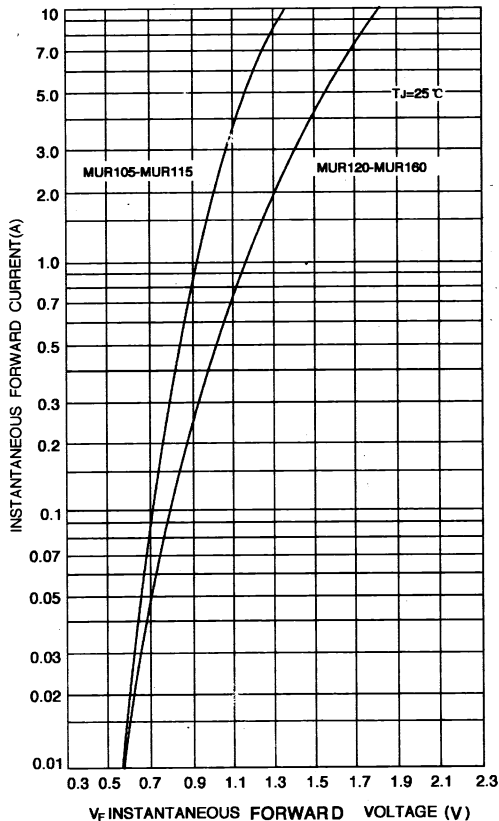


FIG. 2 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

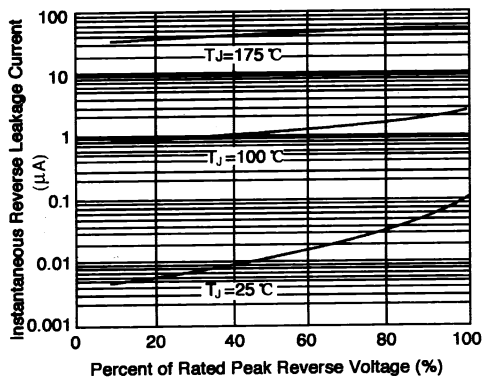


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

