**TECHNICAL DATA**
**DATA SHEET 4970, REV. E**

**Ultrafast Recovery Rectifier**

- Hermetic, non-cavity glass package
- Metallurgically bonded
- Operating and Storage Temperature: -65°C to +175°

**MAX. RATINGS / ELECTRICAL CHARACTERISTICS** All ratings are at $T_A$ = 25°C unless otherwise specified.

| Rating | Symbol | Condition | Max | Units |
|---|---|---|---|---|
| WORKING PEAK REVERSE VOLTAGE<br>1N5802, US<br>1N5804, US<br>1N5806, US | $V_{WM}$ | | 50<br>100<br>150 | Volts |
| AVERAGE RECTIFIED FORWARD CURRENT | $I_o$ | $T_L$= 75 °C | 2.5 | Amps |
| PEAK FORWARD SURGE CURRENT | $I_{FSM}$ | $T_p$=8.3ms | 35 | A(pk) |
| MAXIMUM REVERSE CURRENT | $I_R$ @ $V_{RWM}$ | $T_j$ = 25 °C | 1.0 | µAmps |
| MAXIMUM REVERSE CURRENT | $I_R$ @ $V_{RWM}$ | $T_j$ = 125 °C | 175 | µAmps |
| MAX. PEAK FORWARD VOLTAGE (PULSED)<br>300 µsec pulse, duty cycle < 2% | $V_{FM}$ | $I_{FM}$=1.0A<br>$I_{FM}$=2.5A | 0.875<br>0.975 | Volts |
| MAXIMUM REVERSE RECOVERY TIME | $T_{rr}$ | $I_F$=$I_{RM}$=0.5A<br>$I_{REC}$=0.05A | 25 | ns |
| FORWARD RECOVERY VOLTAGE | $V_{FRM}$ | $I_F$=250mA<br>$t_r$=12ns | 2.2 | Volts |
| THERMAL RESISTANCE (Axial)<br>1N5802 thru 1N5806 | $R\theta_{JL}$ | L=.375 | 36 | °C/W |
| THERMAL RESISTANCE (MELF)<br>1N5802US thru 1N5806US | $R\theta_{JC}$ | L=0 | 13 | °C/W |

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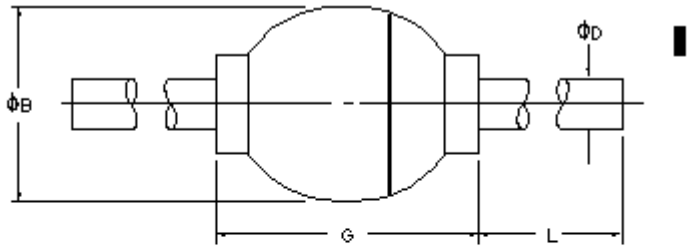
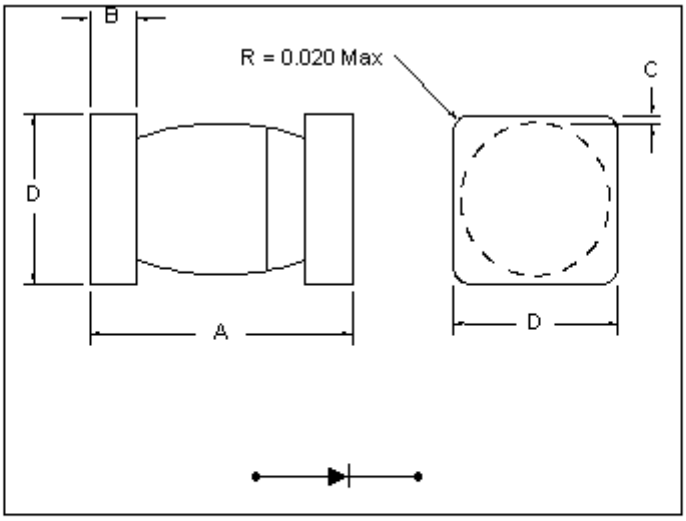
## MECHANICAL DIMENSIONS In Inches / (mm)

## MECHANICAL DIMENSIONS In Inches / (mm), min./max.




| PACKAGE | DIMENSIONS - INCHES / MILLIMETERS | | | |
|---|---|---|---|---|
| STYLE | ΦB | ΦD | G | L |
| 106 | .065/.085<br>1.65/2.16 | .027/.032<br>.69/.81 | .125/.250<br>3.18/6.35 | .700/1.30<br>17.78/33.02 |




| PACKAGE | DIMENSIONS - INCHES / MILLIMETERS | | | |
|---|---|---|---|---|
| STYLE | A | B | C | D |
| MELF-A | .168/.200<br>4.27/5.08 | 0.019/.028<br>.48/.71 | .003 Min<br>.08 Min | .091/.103<br>2.31/2.62 |

**Note:** The cathode side is marked with a dark colored band on one side of the diode body.

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