

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°

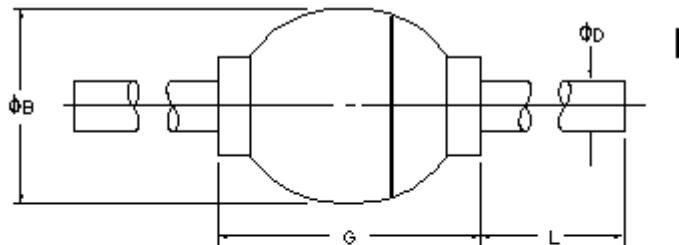
MAX. RATINGS / ELECTRICAL CHARACTERISTICS All ratings are at $T_A = 25^\circ\text{C}$ unless otherwise specified.

Rating	Symbol	Condition	Max	Units
WORKING PEAK REVERSE VOLTAGE 1N5802, US 1N5804, US 1N5806, US	V_{WM}		50 100 150	Volts
AVERAGE RECTIFIED FORWARD CURRENT	I_o	$T_L = 75^\circ\text{C}$	2.5	Amps
PEAK FORWARD SURGE CURRENT	I_{FSM}	$T_p = 8.3\text{ms}$	35	A(pk)
MAXIMUM REVERSE CURRENT	$I_R @ V_{RWM}$	$T_j = 25^\circ\text{C}$	1.0	μAmps
MAXIMUM REVERSE CURRENT	$I_R @ V_{RWM}$	$T_j = 125^\circ\text{C}$	175	μAmps
MAX. PEAK FORWARD VOLTAGE (PULSED) 300 μsec pulse, duty cycle < 2%	V_{FM}	$I_{FM}=1.0\text{A}$ $I_{FM}=2.5\text{A}$	0.875 0.975	Volts
MAXIMUM REVERSE RECOVERY TIME	T_{rr}	$I_F=I_{RM}=0.5\text{A}$ $I_{REC}=0.05\text{A}$	25	ns
FORWARD RECOVERY VOLTAGE	V_{FRM}	$I_F=250\text{mA}$ $t_r=12\text{ns}$	2.2	Volts
THERMAL RESISTANCE (Axial) 1N5802 thru 1N5806	$R\theta_{JL}$	$L=0.375$	36	$^\circ\text{C}/\text{W}$
THERMAL RESISTANCE (MELF) 1N5802US thru 1N5806US	$R\theta_{JC}$	$L=0$	13	$^\circ\text{C}/\text{W}$

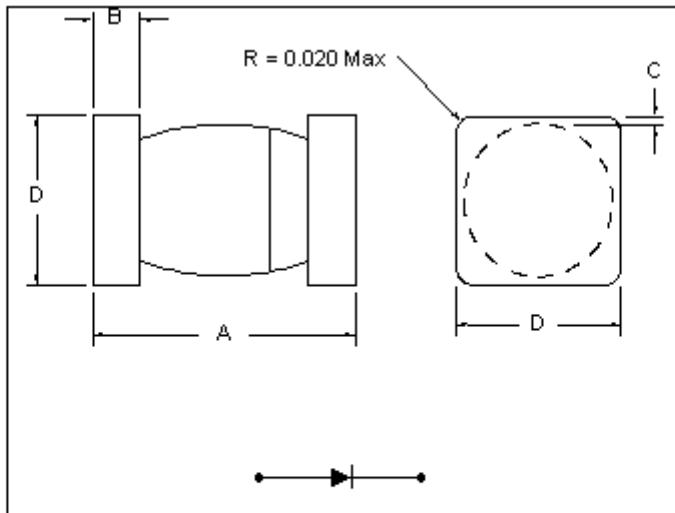
TECHNICAL DATA
DATA SHEET 4970, REV. E

MECHANICAL DIMENSIONS In Inches / (mm)

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



PACKAGE	DIMENSIONS - INCHES / MILLIMETERS			
STYLE	B	D	G	L
106	.065/.085 1.65/2.16	.027/.032 .69/.81	.125/.250 3.18/6.35	.700/1.30 17.78/33.02



PACKAGE	DIMENSIONS - INCHES / MILLIMETERS			
STYLE	A	B	C	D
MELF-A	.168/.200 4.27/5.08	.019/.028 .48/.71	.003 Min .08 Min	.091/.103 2.31/2.62

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

TECHNICAL DATA
DATA SHEET 4970, REV. E

DISCLAIMER:

- 1- *The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).*
- 2- *In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.*
- 3- *In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.*
- 4- *In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.*
- 5- *No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.*
- 6- *The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of Sensitron Semiconductor.*
- 7- *The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.*