SENSITRON
SEMICONDUCTOR

TECHNICAL DATA
DATA SHEET 5140, REV -

HIGH EFFICIENCY POWER RECTIFIER

DESCRIPTION: 1500 VOLT, 1.0 AMP ULTRA FAST RECTIFIER

FEATURES:

- **Single Chip Construction**
- **Hermetically Sealed**
- **Metallurgically Bonded**
- **Ultra Fast Recovery: 80 ns max @ 25°C**
- **Low Reverse Leakage Current**
- **For High Efficiency Applications**
- **TX, TXV and S-Level Screening Available**

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

RATING	CONDITIONS	MIN	TYP	MAX	UNIT
Peak Inverse Voltage (PIV)	-	-	-	1500	Vdc
Average DC Output Current (I_O)	T_L = +75°C, L = 0"	-	-	1.0	Amps
Peak Single Cycle Surge Current (I_{FSM})	t_p = 8.3 ms Single Half Cycle Sine Wave, Superimposed On Rated Load	-	-	15	Amps(pk)
Operating and Storage Temp. (T_{OP} & T_{STG})	-	-65	-	+175	°C
Breakdown Voltage (V_{BR})	I_R = 50 μA	1500			Vdc
Maximum Forward Voltage (V_F)	I_F = 0.75 A I_F = 1.0 A (300 μsec pulse, duty cycle < 2%)	- -	- -	2.5 3.0	Volts
Maximum Instantaneous Reverse Current At Rated PIV	T_A = +25°C T_A = +125°C	- -	- -	2 100	μAmps
Reverse Recovery Time (t_{rr})	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A T_A = 25°C T_A = 100°C	 - -	 - -	 80 250	nsec
Thermal Resistance ($R_{\Theta JL}$, AXIAL) ($R_{\Theta JEC}$, MELF)	Junction to Lead, d = 0.375" Junction to End Caps	- -	- -	38 13	°C/W

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

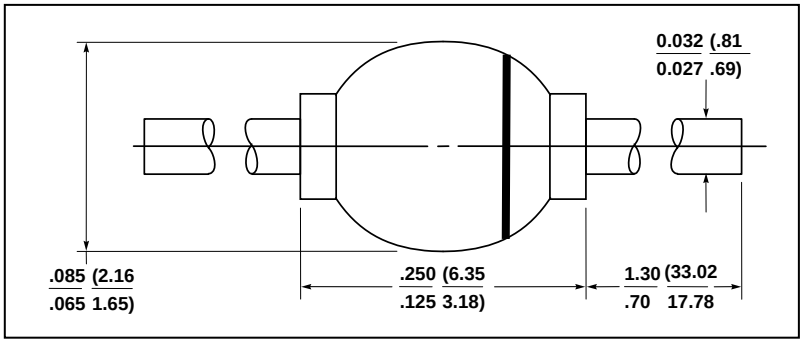
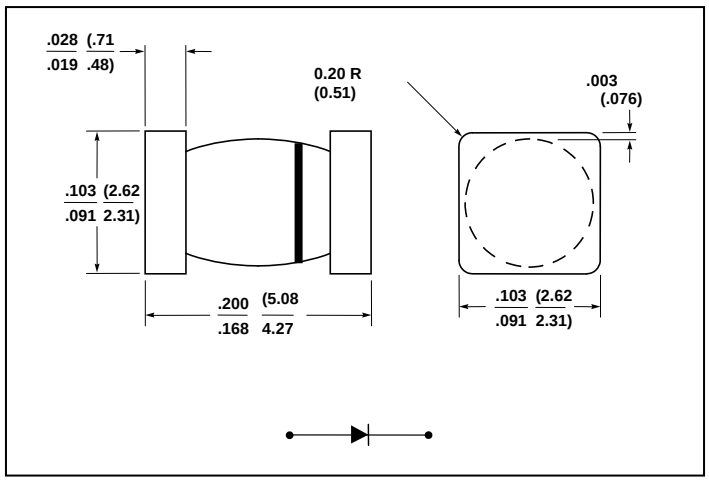


FIG. 106: Axial Lead Rectifier Outlines



MELF-A: MELF Package Outlines

NOTE: Cathode side of device is indicated by dark band marked on body.