

## HIGH EFFICIENCY POWER RECTIFIER

**DESCRIPTION: 1400 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  $T_A = 25^\circ\text{C}$  unless otherwise specified

RATING	CONDITIONS	MIN	TYP	MAX	UNIT
Peak Inverse Voltage (PIV)	-	-	-	1400	Vdc
Average DC Output Current ( $I_o$ )	$T_L = +75^\circ\text{C}$ , $L = 0''$	-	-	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	$^\circ\text{C}$
Breakdown Voltage ( $V_{BR}$ )	$I_R = 50 \mu\text{A}$	1400			Vdc
Maximum Forward Voltage ( $V_F$ )	$I_F = 0.75$ A	-	-	2.5	Volts
	$I_F = 1.0$ A (300 $\mu\text{sec}$ pulse, duty cycle < 2%)	-	-	3.0	
Maximum Instantaneous Reverse Current At Rated PIV	$T_A = +25^\circ\text{C}$	-	-	2	$\mu\text{Amps}$
	$T_A = +125^\circ\text{C}$	-	-	100	
Reverse Recovery Time ( $t_{rr}$ )	$I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_{RR}=0.25\text{A}$				
	$T_A = 25^\circ\text{C}$	-	-	80	nsec
	$T_A = 100^\circ\text{C}$	-	-	250	
Thermal Resistance ( $R_{\theta JL}$ , AXIAL) ( $R_{\theta JEC}$ , MELF)	Junction to Lead, $d = 0.375''$	-	-	38	$^\circ\text{C/W}$
	Junction to End Caps	-	-	13	

# **SENSITRON**

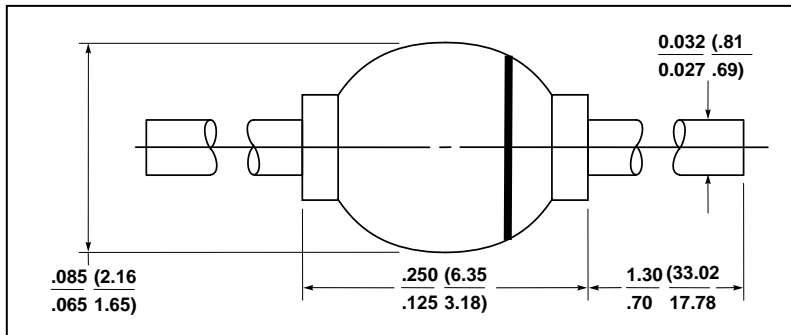
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## **SEMICONDUCTOR**

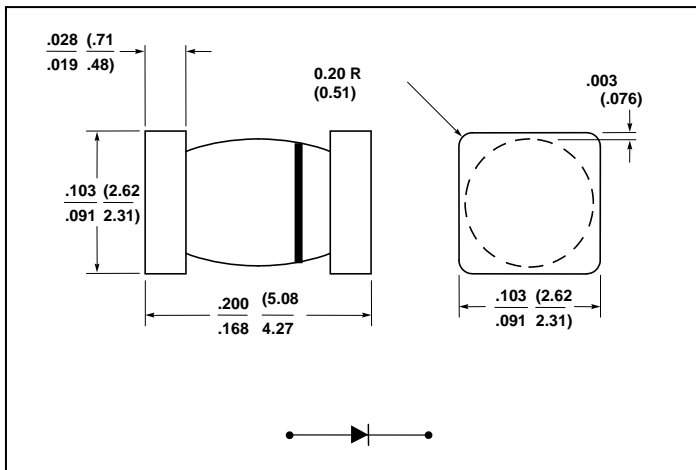
**SRS1140HE**  
**SRS1140HEU**

**TECHNICAL DATA**  
**DATA SHEET 5139, REV -**

**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.

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