

# A1 THRU A7



## 1.0 AMP SURFACE MOUNT SILICON RECTIFIERS

### FEATURES

- \* The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- \* Idea for printed circuit board
- \* Glass passivated Junction chip
- \* Low reverse leakage
- \* High forward surge current capability
- \* High temperature soldering guaranteed 250°C/10 seconds at terminals

### MECHANICAL DATA

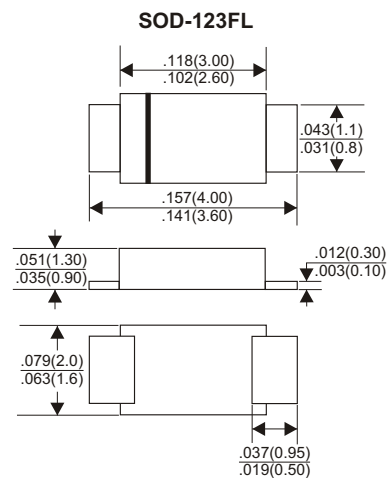
- \* **Case:** SOD-123FL, molded plastic
- \* **Terminals:** plated leads solderable per MIL-STD-750, Method 2026
- \* **Polarity:** Polarity symbol marking on body
- \* **Mounting position:** Any

### VOLTAGE RANGE

50 to 1000 Volts

### CURRENT

1.0 Amperes



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

TYPE NUMBER	A1	A2	A3	A4	A5	A6	A7	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_L=100^\circ\text{C}$	1.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	35							A
Maximum Instantaneous Forward Voltage at 1.0A	1.10							V
Maximum DC Reverse Current $T_a=25^\circ\text{C}$	5.0							$\mu\text{A}$
at Rated DC Blocking Voltage $T_a=125^\circ\text{C}$	500							$\mu\text{A}$
Typical Junction Capacitance (Note1)	18							pF
Typical Thermal Resistance $R_{\theta JA}$	85							$^\circ\text{C/W}$
Operating and Storage Temperature Range $T_J, T_{STG}$	-55 — +150							$^\circ\text{C}$

#### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

## RATING AND CHARACTERISTIC CURVES (A1 THRU A7)

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

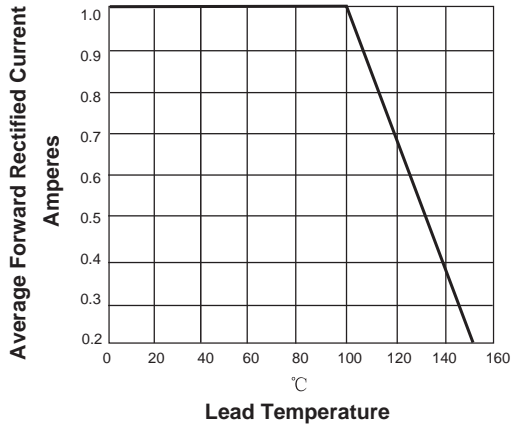


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

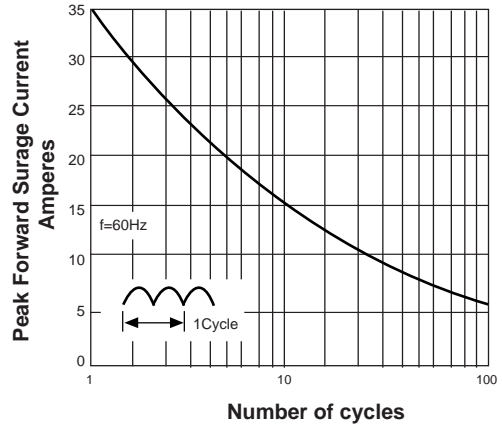


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

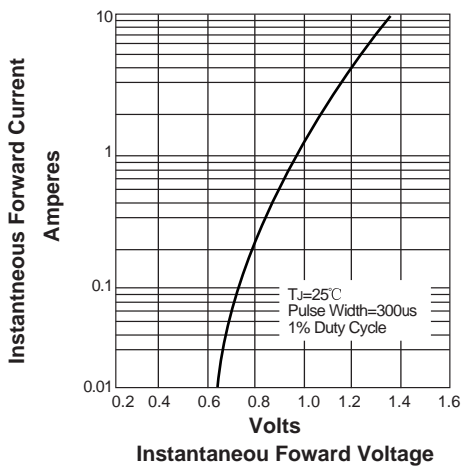
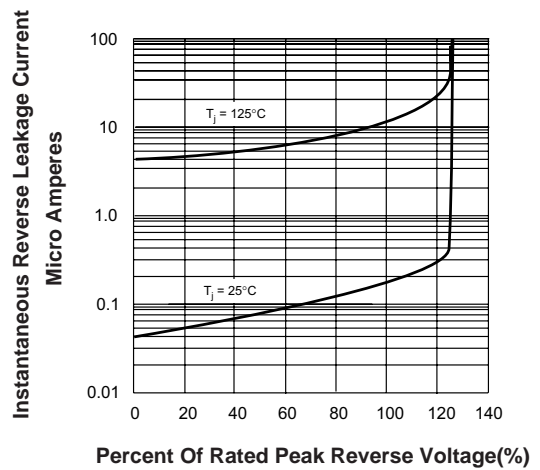
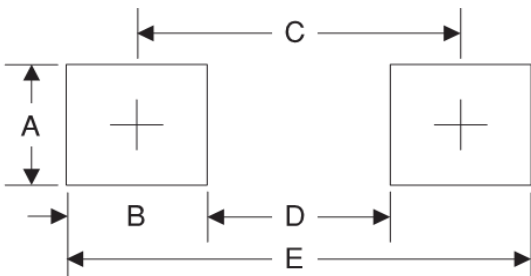


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



### Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.048
B	1.15	0.045
C	3.10	0.122
D	1.95	0.077
E	4.25	0.167