



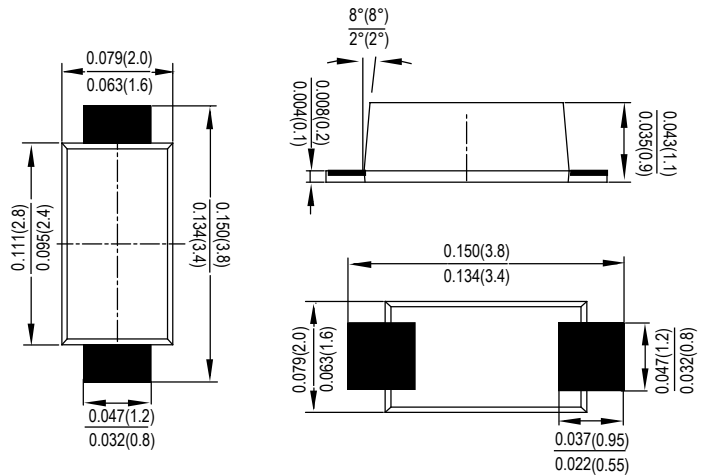
# A1 THRU A7

## 1.0AMP SURFACE MOUNT GLASS RECOVERY RECTIFIER

### Features

- For surface mounted application
- Low forward voltage drop
- High current capability
- High reliability
- Classification Rating 94V-0

### SOD-123FL



Dimensions in inches and (millimeters)

### Mechanical Data

- Case: Molded plastic SOD-123FL
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Making: Type Number

### Maximum Ratings and Electrical Characteristics

Rating at 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	SYMBOL	A1	A2	A3	A4	A5	A6	A7	Unit	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V	
Average Rectified Output Current @ $T_L = 100^\circ C$	$I_{F(AV)}$	1.0							A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave @ $T_j = 25^\circ C$ @ $T_j = 125^\circ C$ Superimposed On Rated Load (JEDEC Method)	$I_{FSM}$	30 24							A	
Non-Repetitive Peak Forward Surge Current 1.0ms Single half sine-wave @ $T_j = 25^\circ C$ @ $T_j = 125^\circ C$ Superimposed On Rated Load (JEDEC Method)	$I_{FSM}$	60 48							A	
10000 times of the wave surge current (time width 1ms, time interval 3s)	$I_{FSM}$	22.5							A	
Rating for fusing (t<8.3ms)	$I^2 t$	3.74							$A^2 s$	
Forward Voltage @ $I_F = 1.0A$	@ $T_A = 25^\circ C$	1.0							V	
	@ $T_A = 125^\circ C$	0.9								
Peak Reverse Current @ $T_A = 25^\circ C$	$I_R$	5.0							uA	
At Rated DC Blocking Voltage @ $T_A = 125^\circ C$		200								
Typical Junction Capacitance (Note 1)	$C_J$	Type	6							pF
		Max	8							
Typical Reverse Recovery Time (Note 2)	$T_{rr}$	1.5							$\mu s$	
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$	25							$^\circ C/W$	
	$R_{\theta JC}$	27								
	$R_{\theta JA}$	123								
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							$^\circ C$	

- Note:
1. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C
  2. Reverse Recovery Test Conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$
  3. Device mounted on FR-4 substrate, 1" \* 1", 2oz, single-sided, PC boards with 0.1" \* 0.15" copper pad.



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FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

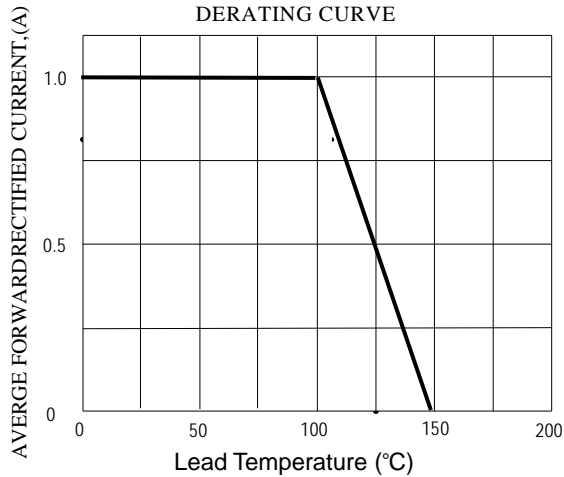


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

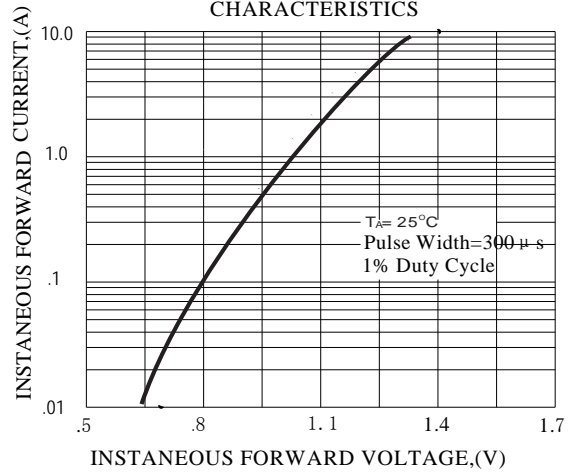


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

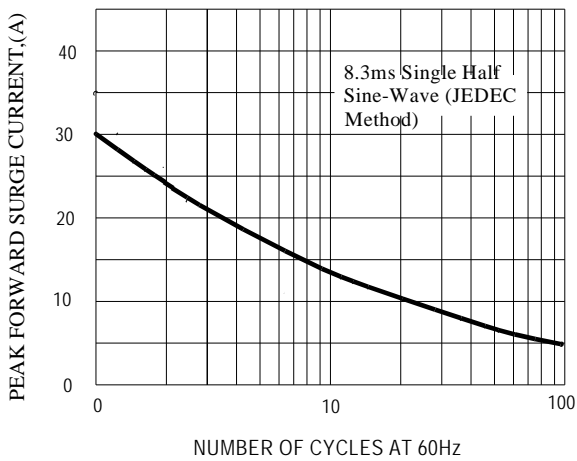


FIG.4-TYPICAL REVERSE CHARACTERISTICS

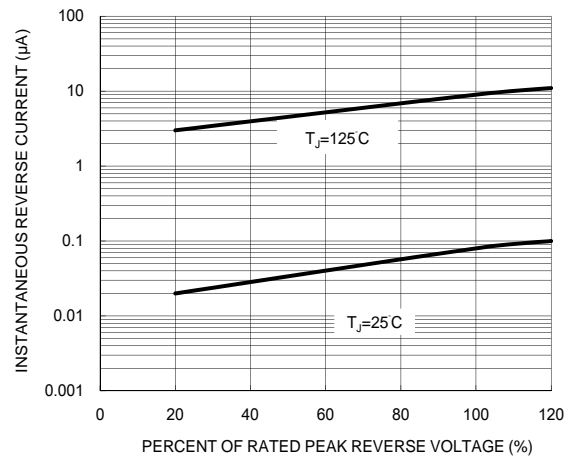


FIG. 5 TYPICAL JUNCTION CAPACITANCE

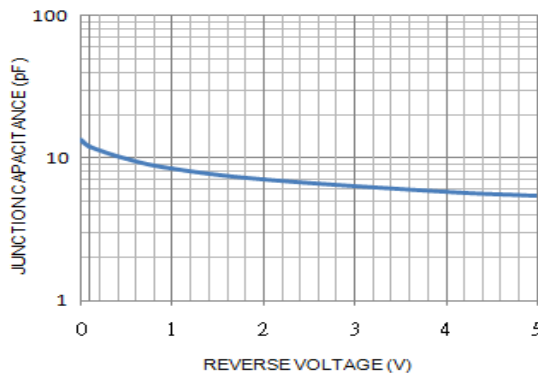


FIG. 6 Forward Power Dissipation

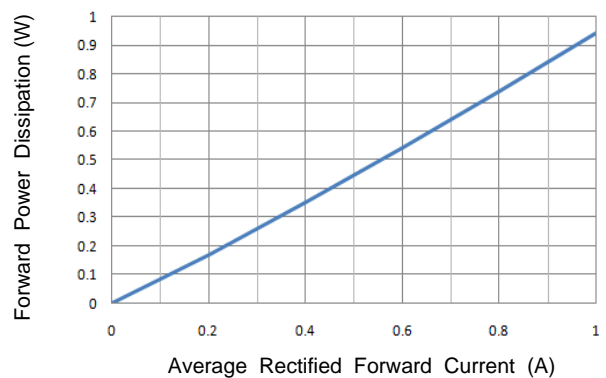
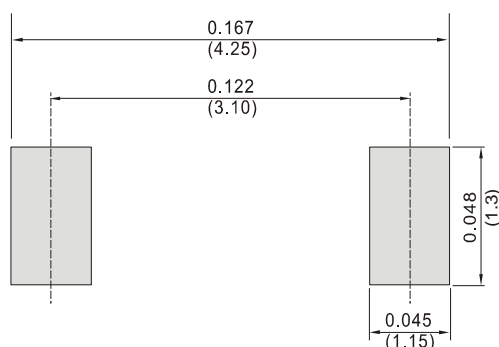


Fig.7 TYPICAL CAPACITANCE





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