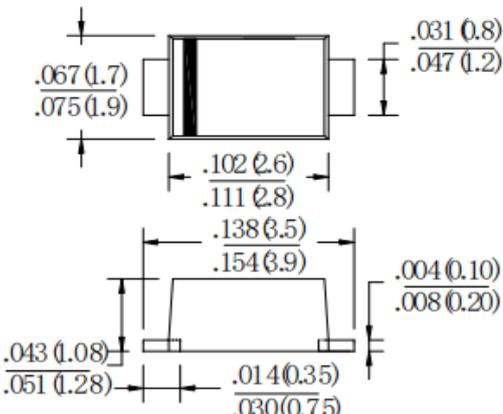


E1A THRU E1M

1.0AMP Surface Mount Glass Superfast Recovery Rectifier

Features	Case: SOD-123FL
<ul style="list-style-type: none"> • Low Power Loss, High Efficiency • Ideally Suited for Automatic Assembly • Guard Ring Die Construction • Plastic Case Material has UL Flammability Classification Rating 94V - 0 	
Mechanical Data	
<ul style="list-style-type: none"> • Case: Molded plastic SOD123FL • Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed • Polarity: Color band denotes cathode end • Mounting Position: Any • Marking: Type Number 	<p style="text-align: center;">Dimensions in inches and (millimeters)</p>

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	E1A	E1B	E1D	E1G	E1J	E1K	E1M	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 @ $T_L = 75^\circ C$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							A
Rating for fusing (t<8.3ms)	$I^2 t$	3.74							A ² s
Forward Voltage @ $I_F = 1.0A$	V_{FM}	0.95		1.3		1.7		2.4	
Peak Reverse Current @ $T_A = 25^\circ C$	I_R	5.0							uA
At Rated DC Blocking Voltage @ $T_A = 125^\circ C$		200							
Maximum Reverse Recovery Time (Note1)	T_{rr}	35							ns
Typical Junction Capacitance (Note 2)	C_J	20		7		6			pF
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	34							°C/W
Operating Temperature Range	T_J	-55 to +150							°C
Storage Temperature Range	T_{STG}	-55 to +150							°C

- Note:
1. Reverse Recovery Test Conditions: $I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$.
 2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C

Fig. 1 Forward Current Derating Curve

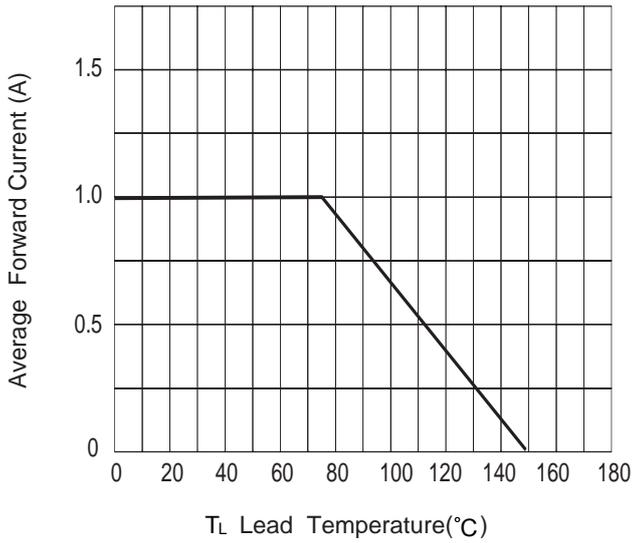


Fig. 2 Typ. Forward Characteristics

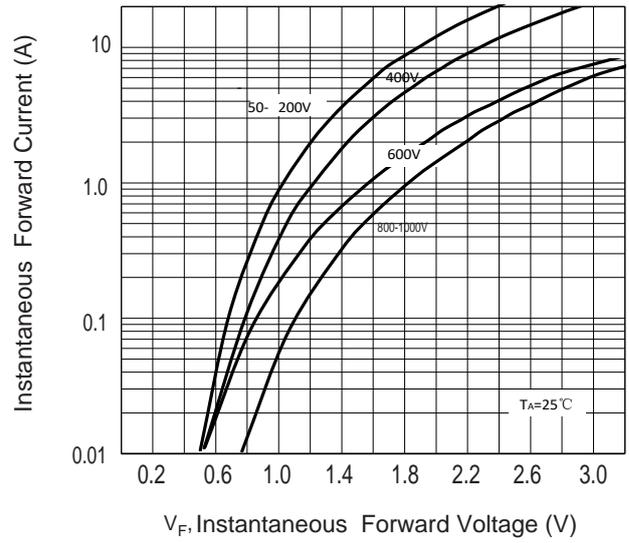


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

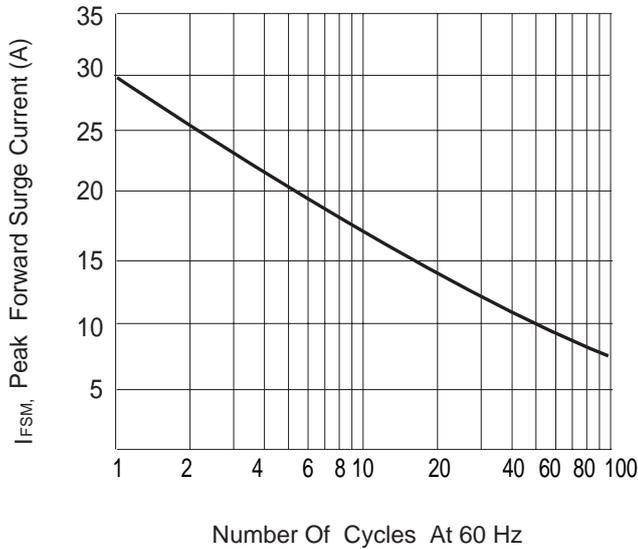


Fig. 4 Typical Junction Capacitance

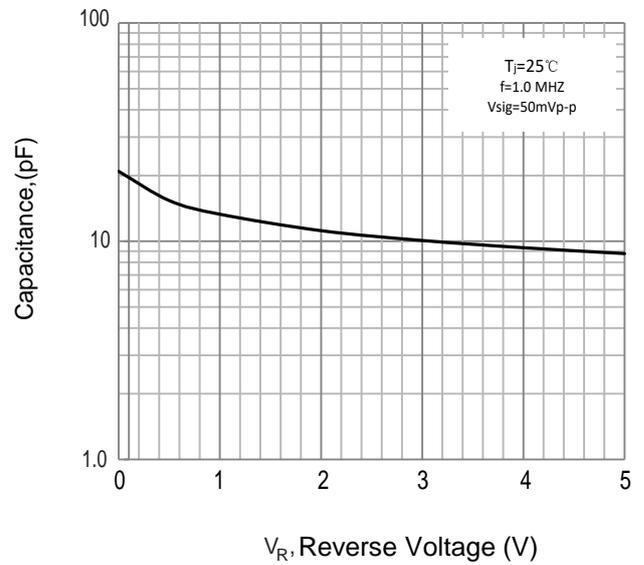


Fig. 5 Typical Reverse Characteristics

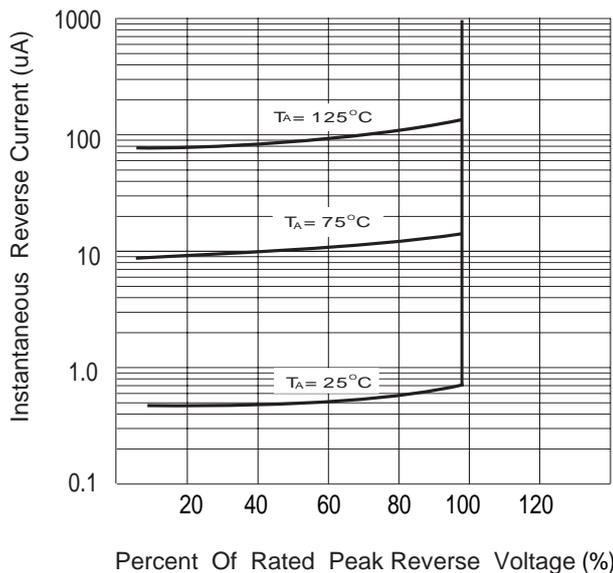


Fig. 6 Mounting PAD Layout

