



SEMICONDUCTOR

# E1A THRU E1M

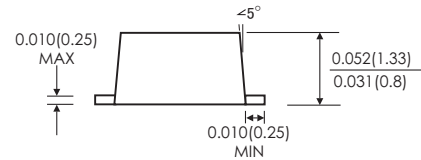
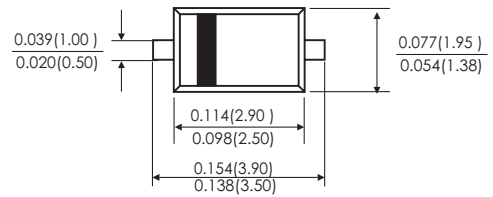
GLASS PASSIVATED  
SUPER FAST RECOVERY RECTIFIER  
Reverse Voltage: 50 to 1000 Volts  
Forward Current: 1.0 Ampere

## FEATURES

- Glass passivated junction
- For Surface Mount Applications, Easy to pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering guaranteed: 260°C/10 seconds at terminals,
- Component in accordance to RoHS 2011/65/EU



## SOD-123FL



Dimensions in inches and (millimeters)

## MECHANICAL DATA

- Case: SOD-123FL molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.01 gram

## 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%.)

	Symbols	E1A	E1B	E1D	E1G	E1J	E1K	E1M	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at $T_L=100^\circ\text{C}$	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30.0							Amps
Maximum Instantaneous Forward Voltage at 1.0 A	$V_F$	0.95		1.3	1.70			Volts	
Maximum DC Reverse Current at rated DC blocking voltage	$T_A=25^\circ\text{C}$	5.0							$\mu\text{A}$
	$T_A=125^\circ\text{C}$								
Thermal resistance from junction to ambient	$R_{\theta JA}$	150							$^\circ\text{C}/\text{W}$
Maximum reverse recovery time(Note1)	$t_{rr}$	35							ns
Typical junction capacitance(Note2)	$C_J$	15.0							pF
Operating junction and storage temperature range	$T_J$	-55 to +150							$^\circ\text{C}$
	$T_{STG}$								

Note: 1. Test conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$ .

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

# RATINGS AND CHARACTERISTIC CURVES E1A THRU E1M

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

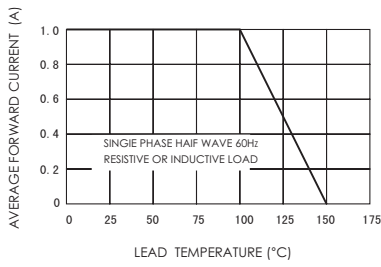


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

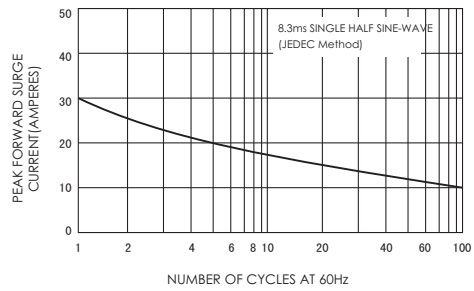


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

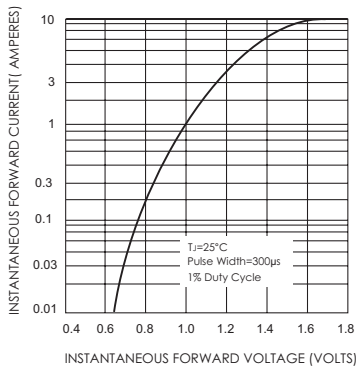


FIG.4-TYPICAL REVERSE CHARACTERISTICS

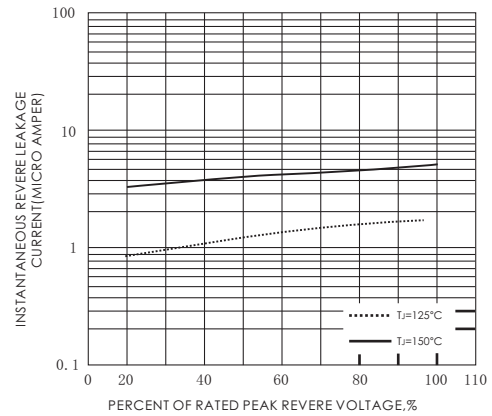


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

FIG.5-TYPICAL JUNCTION CAPACITANCE

