

# SODE1A THRU SODE1J

## SODE1A THRU SODE1J 1.0Amp Super Fast Surface Mounted Rectifiers

### General description

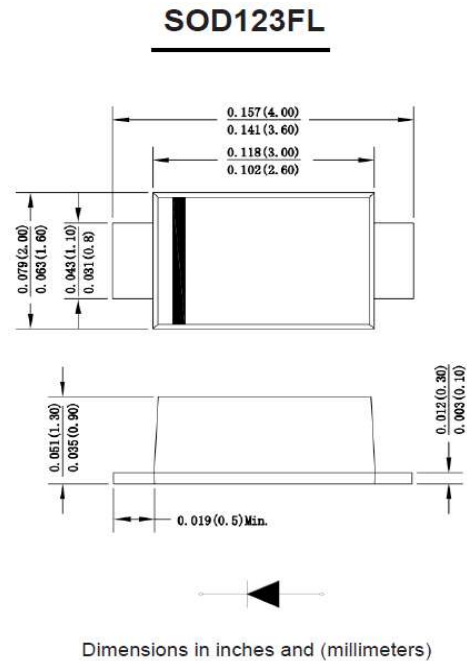
1.0Amp Super Fast Surface Mounted Rectifiers

### FEATURES

- For surface mounted applications
- 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: Molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Polarity symbol marking on body
- Mounting Position: Any
- Weight: 0.0007 ounce, 0.02 grams



### Absolute Maximum Ratings ( $T_a=25^\circ\text{C}$ unless otherwise specified)

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	SYMBOLS	SOD E1A	SOD E1B	SOD E1C	SOD E1D	SOD E1E	SOD E1G	SOD E1J	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	600	VOLTS
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	210	280	420	VOLTS
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	300	400	600	VOLTS
Maximum average forward rectified current at $T_L=55^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
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 1.0A	$V_F$	0.95			1.3		1.7		Volts
Maximum DC reverse current at rated DC blocking voltage	$I_R$	$T_A=25^\circ\text{C}$				$T_A=100^\circ\text{C}$			$\mu\text{A}$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	35				ns			
Typical junction capacitance (NOTE 2)	$C_J$	15.0				pF			
Typical thermal resistance (NOTE 3)	$R_{qJA}$	85.0				$^\circ\text{C/W}$			
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

NOTES: 1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$   
2. Measured at 1 MHz and applied  $V_r = 4.0$  volts.

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## Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

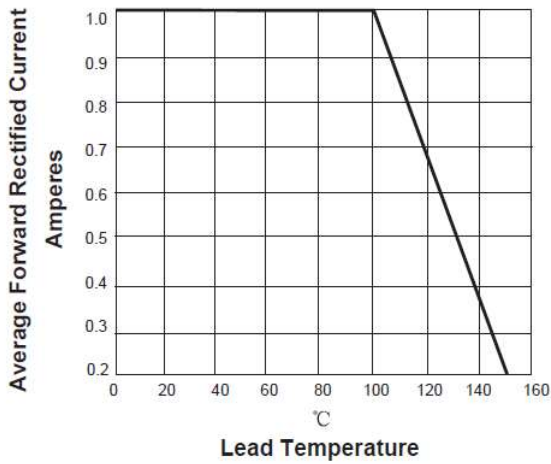


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

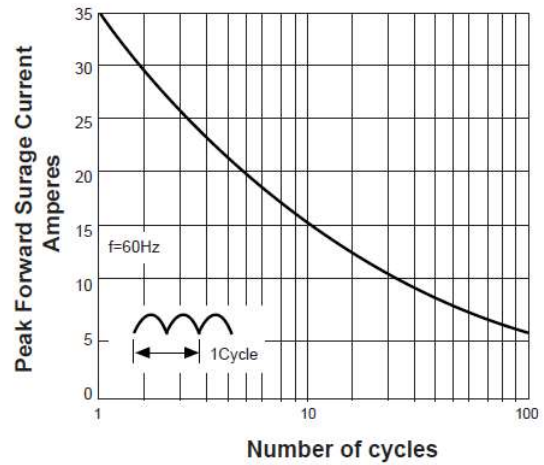


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

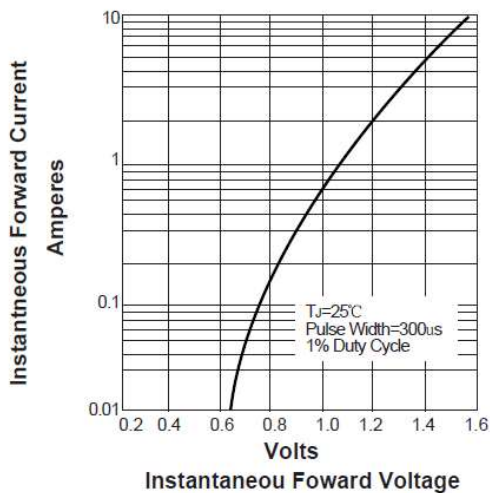
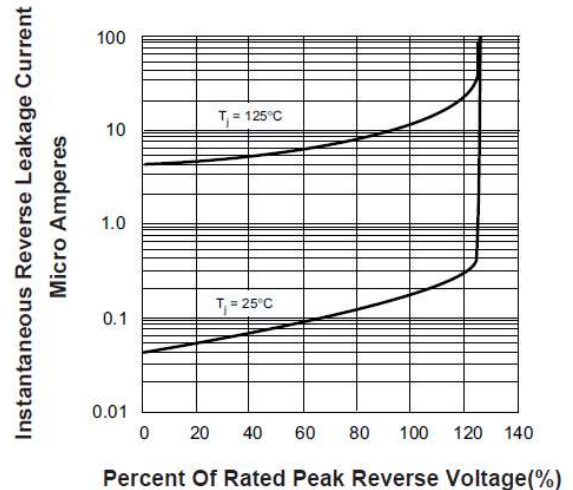
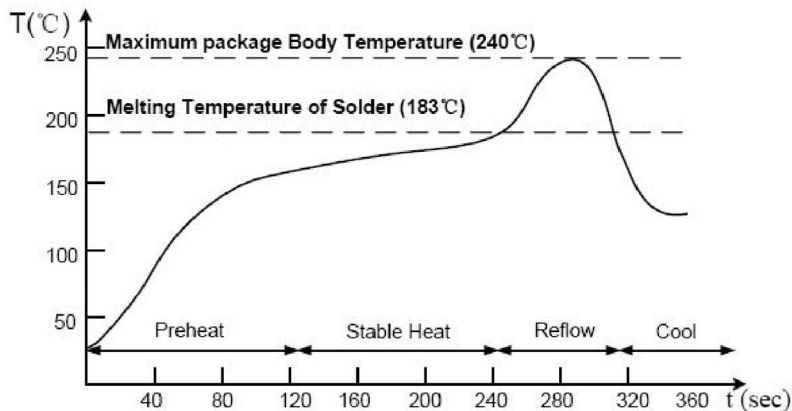


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



## Suggested Soldering Temperature Profile



### Note

- ◆ Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- ◆ The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- ◆ Devices can be cleaned using standard industry methods and solvents.
- ◆ If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

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