

# SODR1A THRU SODR1M

## SODR1A THRU SODR1M 1.0Amp Fast Recovery Surface Mounted Rectifiers

### General description

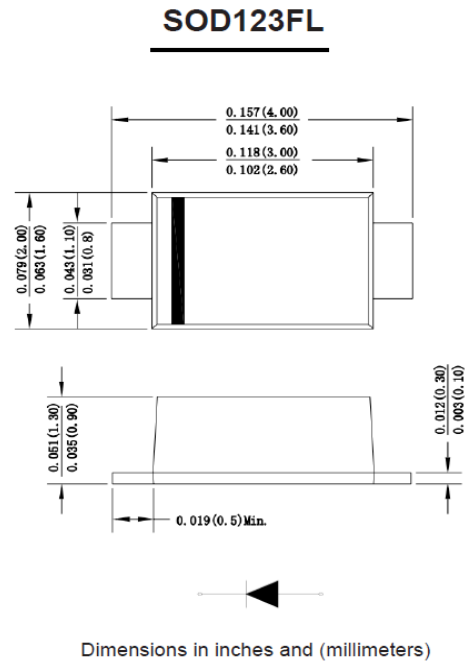
1.0Amp Fast Recovery Surface Mounted Rectifiers

### 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 R1A	SOD R1B	SOD R1D	SOD R1G	SOD R1J	SOD R1J	SOD R1M	UNITS
Marking Code	Mark	F1	F2	F3	F4	F5	F6	F7	N/A
Maximum repetitive 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
Maximum average forward rectified current at $T_L=100^\circ\text{C}$	$I_{(AV)}$	1.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	35							A
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.3							V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	$I_R$	5.0 500							$\mu\text{A}$
Maximum reverse recovery time (Note 1)	$T_{rr}$	150				250	500		ns
Typical junction capacitance (Note 2)	$C_J$	9.0							pF
Typical thermal resistance	$R_{qJA}$	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

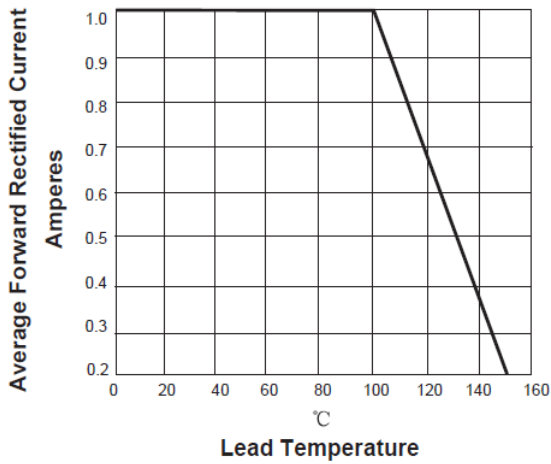


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

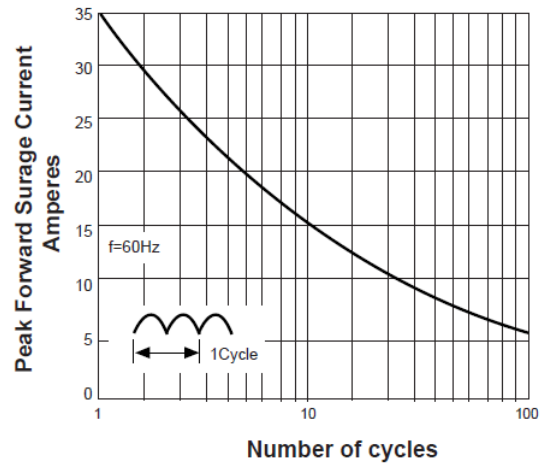


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

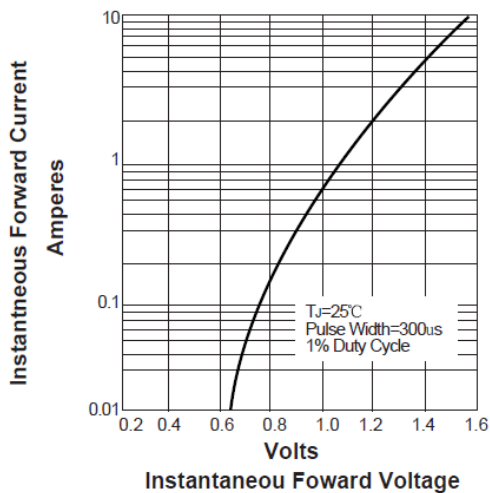
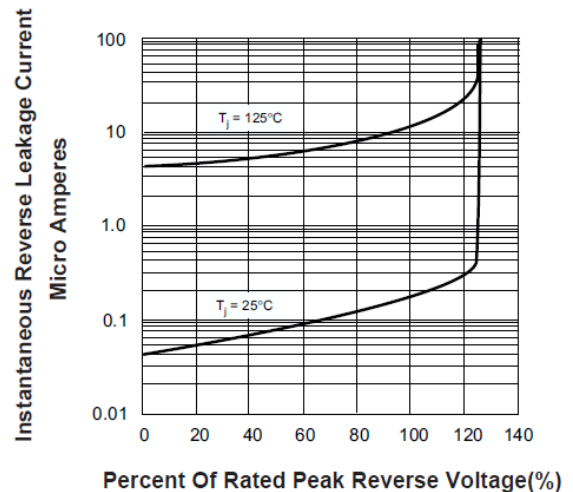
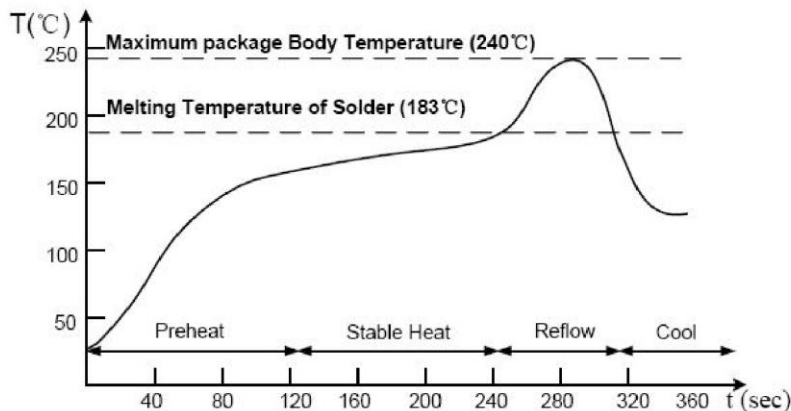


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



## 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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