SODE1A THRU SODE1J

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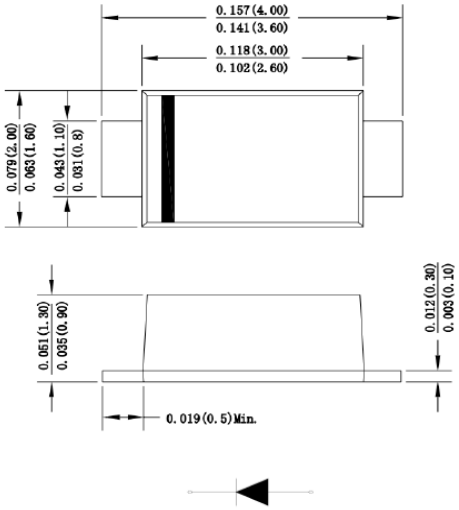
1.0Amp Super Fast Surface Mounted Rectifiers

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

SOD123FL



Dimensions in inches and (millimeters)

Absolute Maximum Ratings(Ta=25℃ 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
Marking Code	Mark	E1A	E1B	E1C	E1D	E1E	E1G	E1J	N/A
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℃	$I_{(AV)}$	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 T_A=25℃ at rated DC blocking voltage T_A=100℃	I_R	5.0 50.0							uA
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							℃/W
Operating junction and storage temperature range	T_J,T_{STG}	-55 to +150							℃

NOTES: 1. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, Irr=0.25A
2. Measured at 1 MHz and applied Vr = 4.0 volts.

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Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

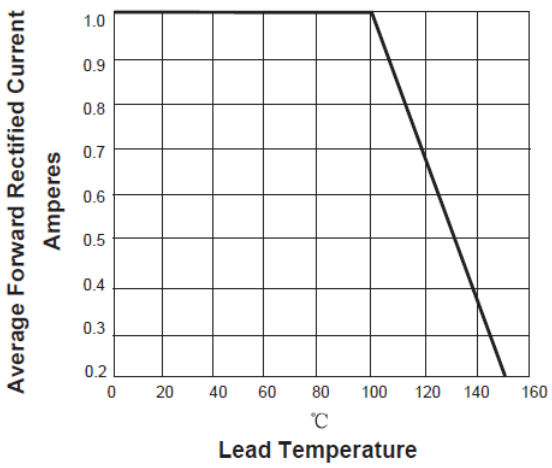


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

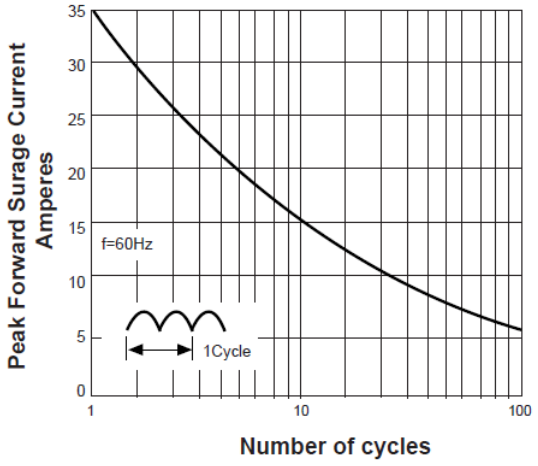


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

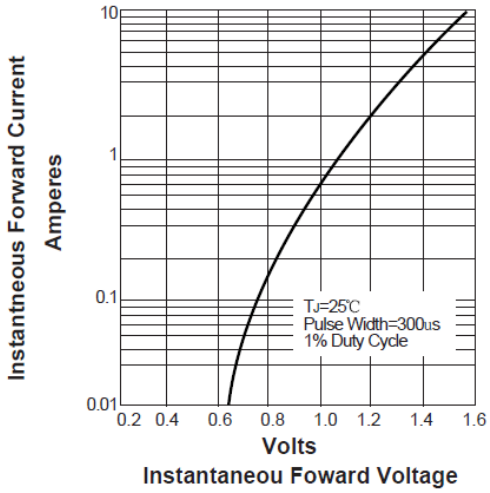
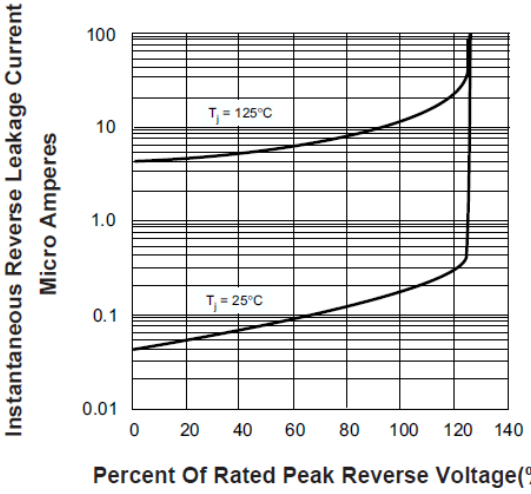
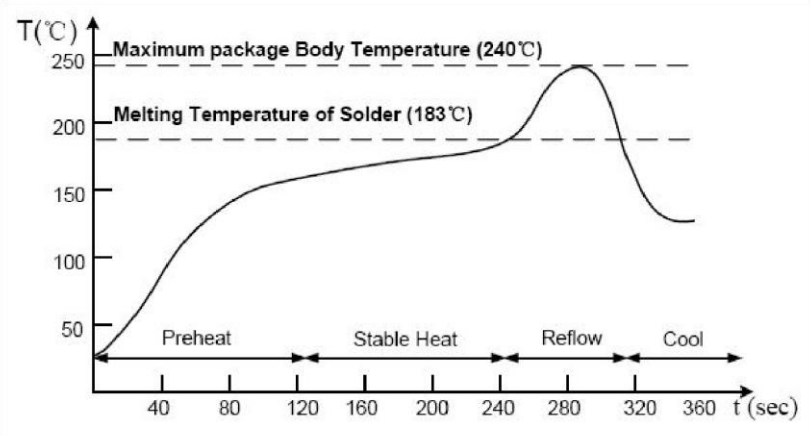


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



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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