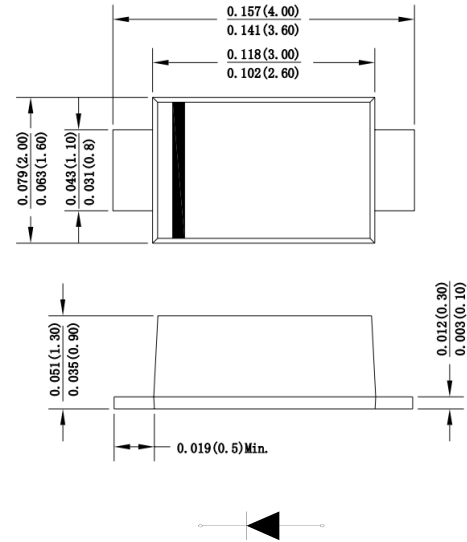




Features

- ◆ 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

SOD123FL



Dimensions in inches and (millimeters)

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

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	ES1A	ES1B	ES1C	ES1D	ES1F	ES1G	ES1J	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current at $T_L=100^\circ C$	$I_{(AV)}$	1.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30.0							A
Maximum instantaneous forward voltage at 1.0A	V_F	0.95				1.25		1.7	V
Maximum DC reverse current $T_A = 25^\circ C$ at rated DC blocking voltage $T_A = 125^\circ C$	I_R					5.0		500	μA
Maximum reverse recovery time(Note 1)	T_{rr}					35			ns
Typical junction capacitance (Note2)	C_J					18.0			pF
Typical thermal resistance	R_{qJA}					70.0			$^\circ C/W$
Operating junction and storage temperature range	T_J, T_{STG}					-55 to +150			$^\circ C$

Note: 1.Reverse recovery time test condition: $I_F=0.5A$ $I_R=1.0A$ $I_{rr}=0.25A$
 2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.



Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

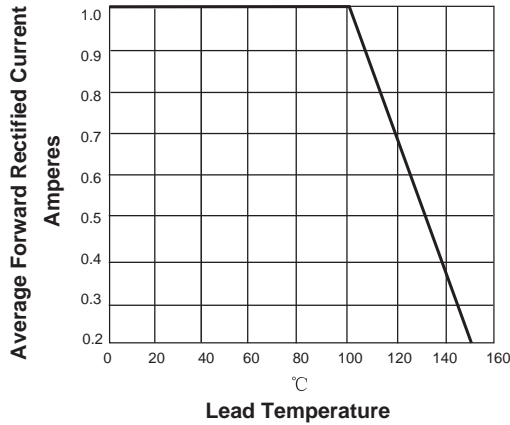


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

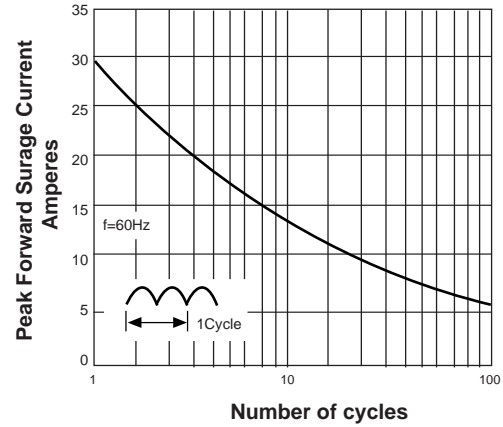


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

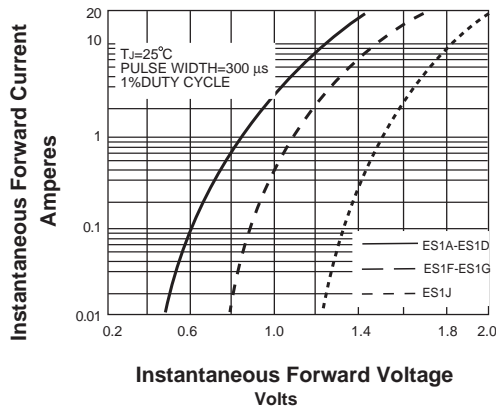
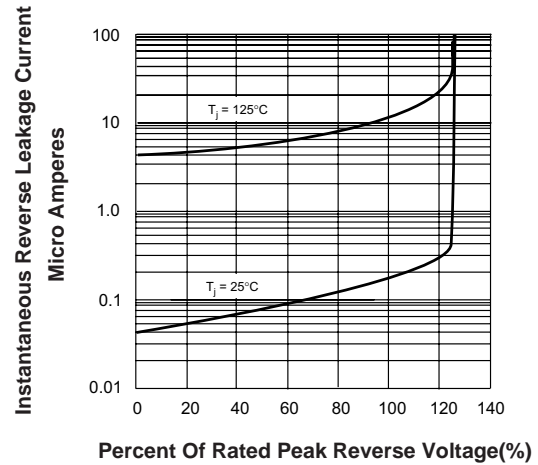
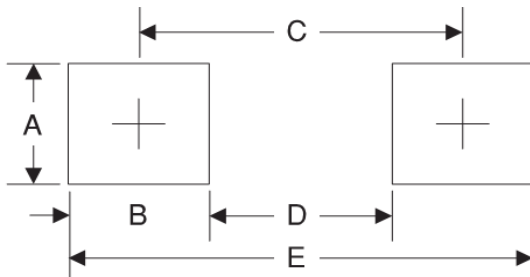


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.048
B	1.15	0.045
C	3.10	0.122
D	1.95	0.077
E	4.25	0.167