

ES1K

1.0A 800V Super Fast Recovery Surface Mounted Rectifiers

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 260°C/10 seconds at terminals

Mechanical Data

Case : Molded plastic body

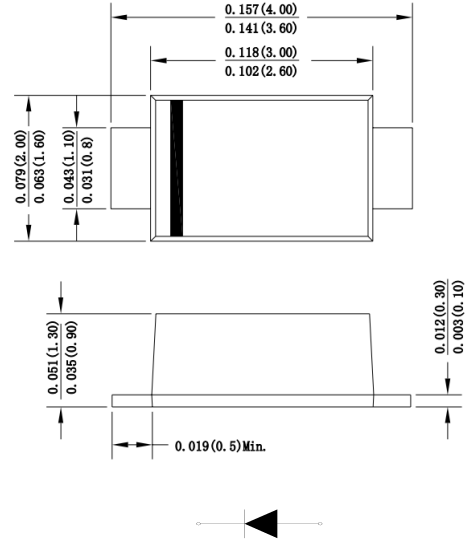
Terminals : Solder plated, solderable per MIL-STD-750,Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.0007 ounce, 0.02 grams

SOD123FL



Dimensions in inches and (millimeters)

MARKING:E1K

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	ES1K	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	800	V
Maximum RMS voltage	V_{RMS}	560	V
Maximum DC blocking voltage	V_{DC}	800	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}	30.0	A
Maximum instantaneous forward voltage at 1.0A	V_F	1.7	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	μA
Maximum reverse recovery time(Note 1)	T_{rr}	35	ns
Typical junction capacitance (Note2)	C_J	7.0	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	$^\circ\text{C}$

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

Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

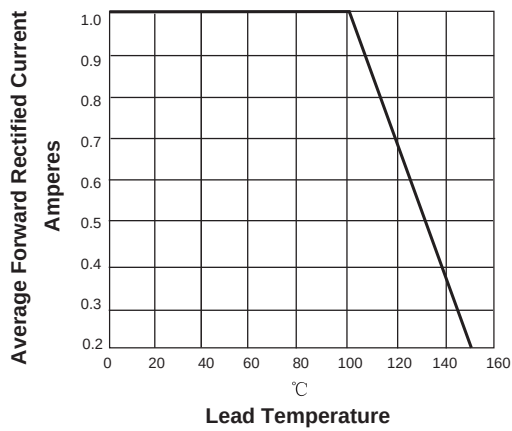


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

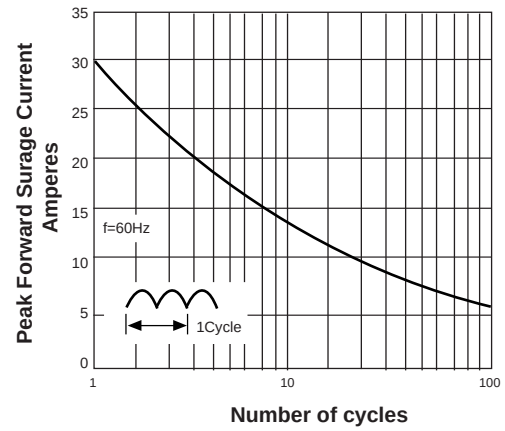


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

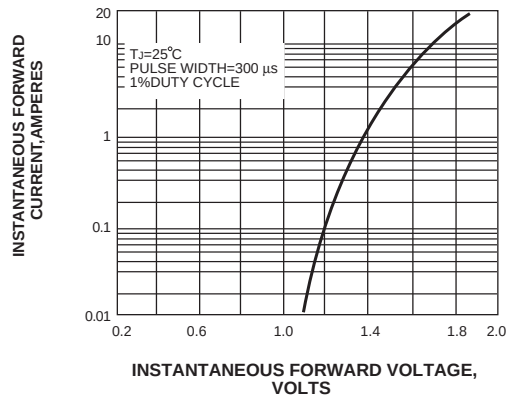


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

