

1.0Amp Super Fast Recovery Surface Mounted Rectifiers

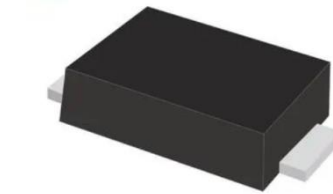
Description

General Application Standard Surface Mounted rectifier, encapsulated in a SOD-123FL Surface-Mounted Device (SMD) plastic package.

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℃/10 seconds at terminals

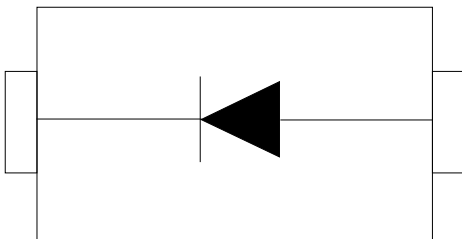
Package



Mechanical Characteristics

- Case: JEDEC SOD-123FL molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Polarity symbol marking on body
- Case Material: “Green” Molding Compound

Dimensions and Pin Configuration



Graphic symbol

Ordering Information

Part Number	Shipping	Reel Size
E1	3000/Tape & Reel	7 inch
E2	3000/Tape & Reel	7 inch
E3	3000/Tape & Reel	7 inch
E4	3000/Tape & Reel	7 inch
E5	3000/Tape & Reel	7 inch
E6	3000/Tape & Reel	7 inch
E7	3000/Tape & Reel	7 inch

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

Items	Symbol	E1	E2	E3	E4	E5	E6	E7	UNIT
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	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30.0							A
Typical thermal resistance	R_{QJA}	85.0							$^{\circ}\text{C/W}$
Operating junction temperature range	T_J	$-55 \sim +150$							$^{\circ}\text{C}$
Storage temperature range	T_{STG}	$-55 \sim +150$							$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Items	Test conditions	Symbol	E1	E2	E3	E4	E5	E6	E7	UNIT
Maximum instantaneous forward voltage	I _F =1.0A	V _F	1.0				1.3		1.7	V
Maximum DC reverse current	T _A =25℃	I _R	2.0							uA
rated DC blocking voltage	T _A =125℃		200							
Maximum reverse recovery time(Note1)		T _{rr}	35							ns
Typical junction capacitance(Note2)		C _j	7							pF

Note:

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

Typical Performance Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

FIG.1-DERATING CURVE OUTPUT RECTIFIED CURRENT

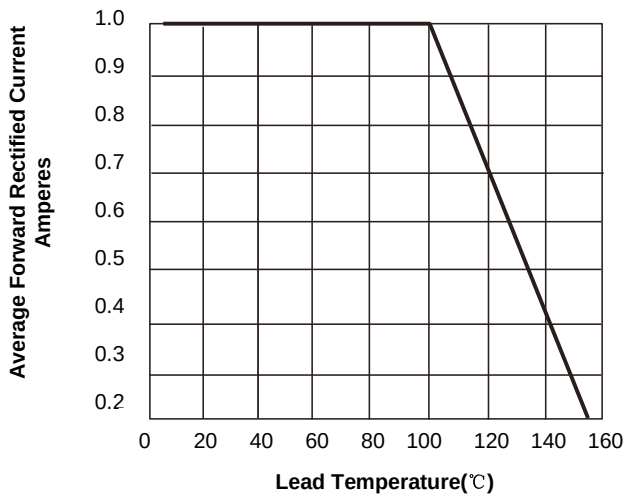


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD

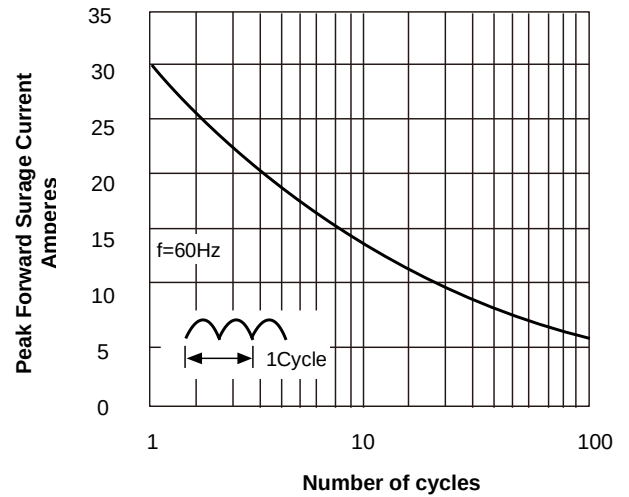


FIG.3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

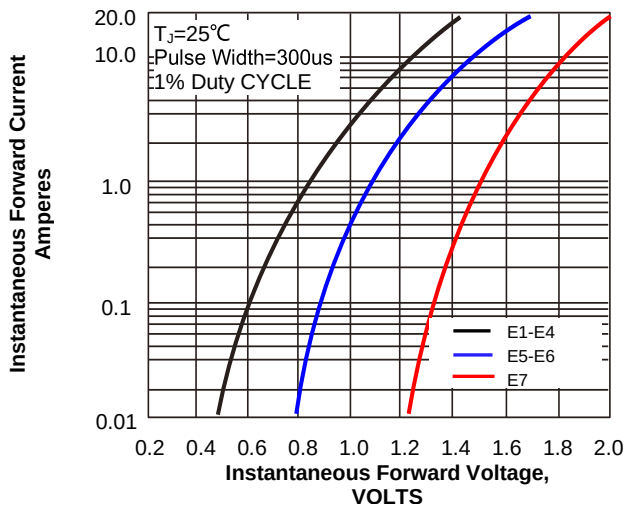
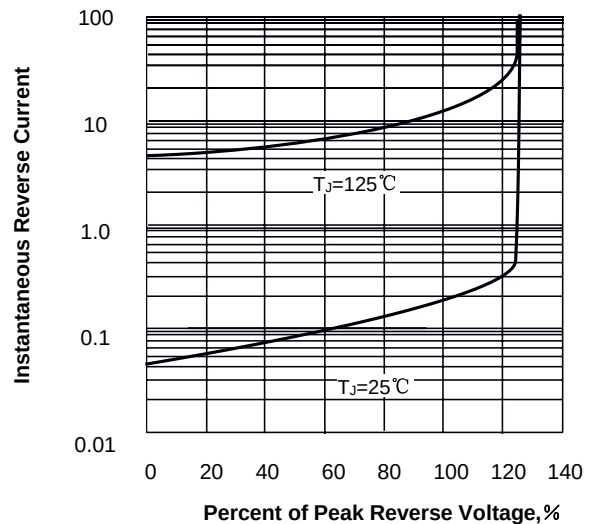
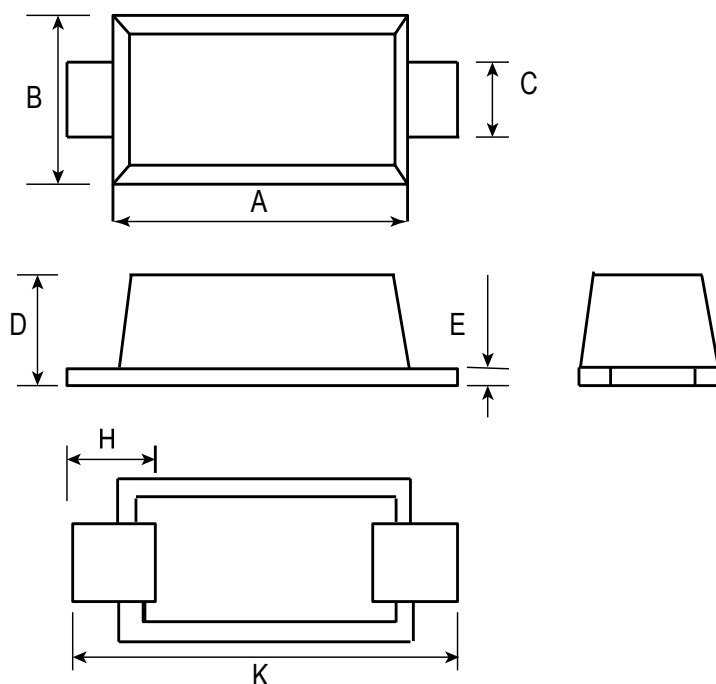


FIG.4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

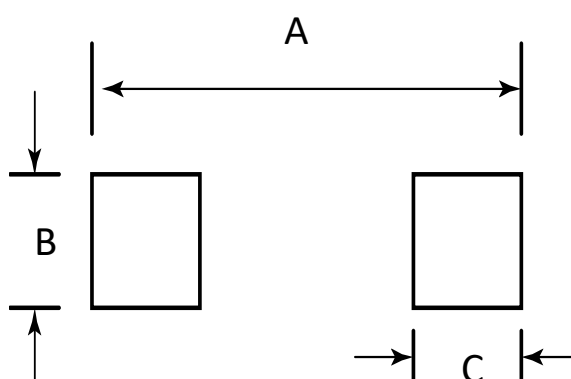


SOD-123FL Package Outline Drawing



DIM	Millimeters		
	Min	Nom	Max
A	2.60	2.80	3.00
B	1.60	1.80	2.00
C	0.80	1.00	1.20
D	0.9		1.30
E	0.10	0.20	0.30
H	0.35		0.85
K	3.50		4.00

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
A	4.19	0.165
B	1.20	0.048
C	0.90	0.036

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