

Features

- Low profile package
- Ideal for automated placement
- Glass passivated pallet chip junction
- Super fast reverse recovery time
- Low switching losses, high efficiency
- High forward surge capability

Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer, automotive, and telecommunication.

Mechanical Data

- Case: SOD-123FL
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

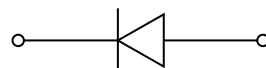
Reverse Voltage

50-600 V

Forward Current

1 Ampere

SOD-123FL



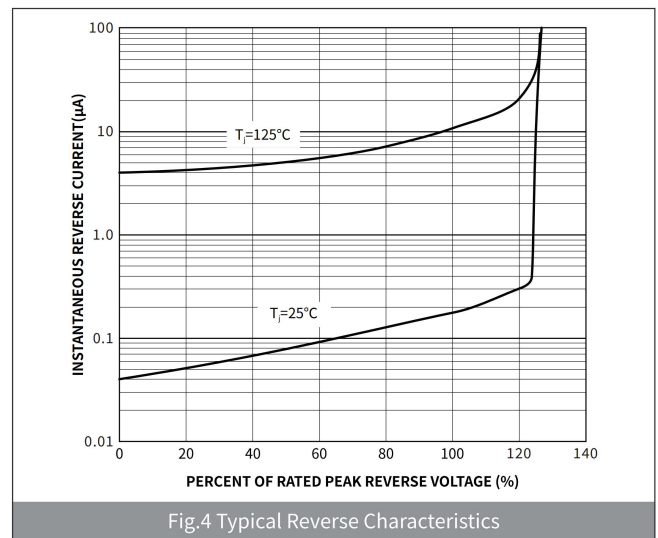
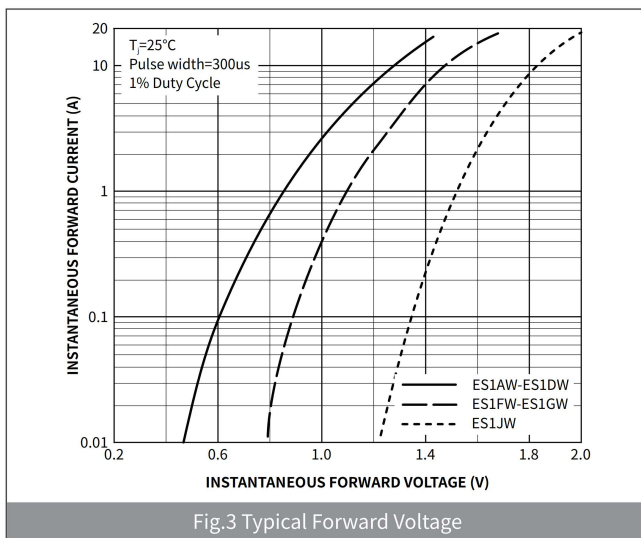
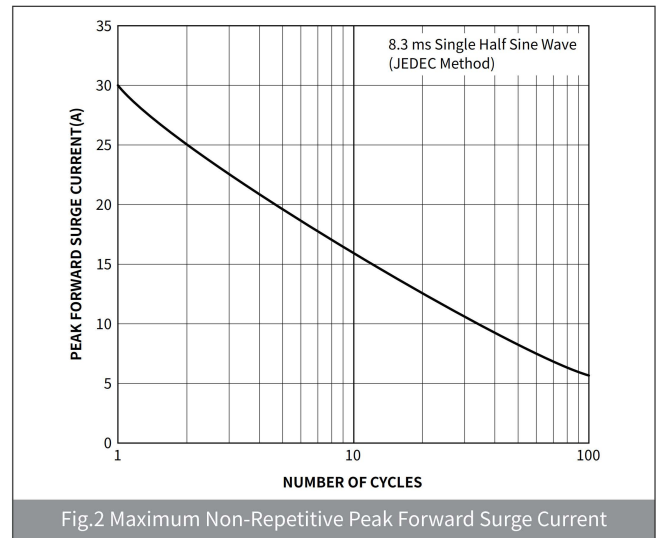
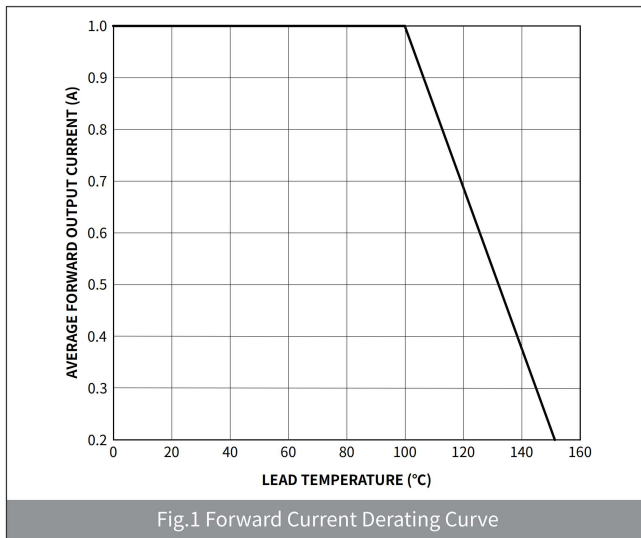
Maximum Ratings (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	ES1AW	ES1BW	ES1CW	ES1DW	ES1EW	ES1GW	ES1JW
Device marking code			E1	E2	E3	E4	E5	E6	E7
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	150	200	300	400	600
Maximum RMS Voltage	V_{RMS}	V	35	70	105	140	210	280	420
Maximum DC blocking Voltage	V_{DC}	V	50	100	150	200	300	400	600
Maximum Average Forward Rectified Current @ 60Hz sinewave, Resistance load, TL (Fig.1)	$I_{F(AV)}$	A	1.0						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	30.0						
Storage temperature	T_{stg}	℃	-55 ~+150						
Junction temperature	T_j	℃	-55 ~+150						
Typical Thermal Resistance	$R_{\theta J-A}$	℃ /W	85						
	$R_{\theta J-L}$	℃ /W	35						

Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	ES1AW	ES1BW	ES1CW	ES1DW	ES1EW	ES1GW	ES1JW
Maximum instantaneous forward voltage	I _F =1.0A	V _F	V	1.0				1.3		1.7
Maximum reverse recovery time	I _F =0.5A,I _R =1.0A,I _{rr} =0.25A	T _{rr}	ns	35						
Maximum DC reverse currentat rated DC blocking voltage	V _R =V _{DC} , T _A =25°C	I _{R1}	μA	2.0						
	V _R =V _{DC} , T _A =125°C	I _{R2}		200						
Typical junction capacitance	4.0V DC,1MHz	C _J	pF	7.0						

Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

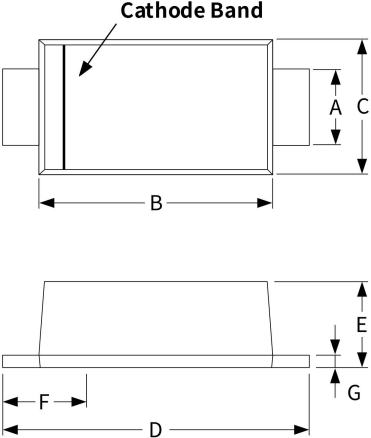


Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-123FL	R1	0.0169	3000	45000	180000	7"

Package Outline Dimensions (SOD -123FL)

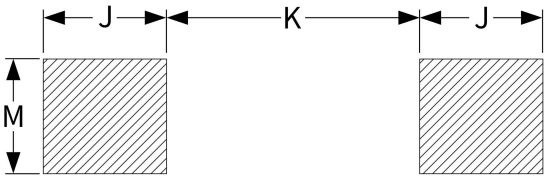
Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.90	1.10	0.035	0.430
B	2.55	2.85	0.100	0.111
C	1.60	1.90	0.063	0.074
D	3.60	3.90	0.031	0.043
E	1.00	1.20	0.031	0.035
F	0.40	0.90	0.047	0.055
G	0.10	0.25	0.003	0.007



The diagram shows two views of the SOD-123FL package. The top view is a plan view showing dimensions A (height of the cathode band), B (width of the cathode band), C (height of the package), and D (width of the package). The bottom view is a side view showing dimensions E (height of the package), F (width of the package), and G (height of the package).

Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	1.00	-	0.040	-
K	-	1.90	-	0.074
M	1.50	-	0.059	-



The diagram shows a suggested pad layout for the SOD-123FL package. It consists of two shaded rectangular pads. The width of each pad is dimension J, the distance between the pads is dimension K, and the height of each pad is dimension M.