

OM SENI

SOD-123FL Surface Mount Fast Recovery Rectifier

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

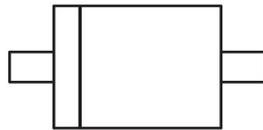
Applications

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

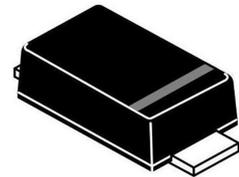
Function Diagram



ES1AW THRU ES1JW

Reverse Voltage
50-600 V

Forward Current
1 Ampere



SOD-123FL

Maximum Ratings (Ta=25°C Unless otherwise specified)

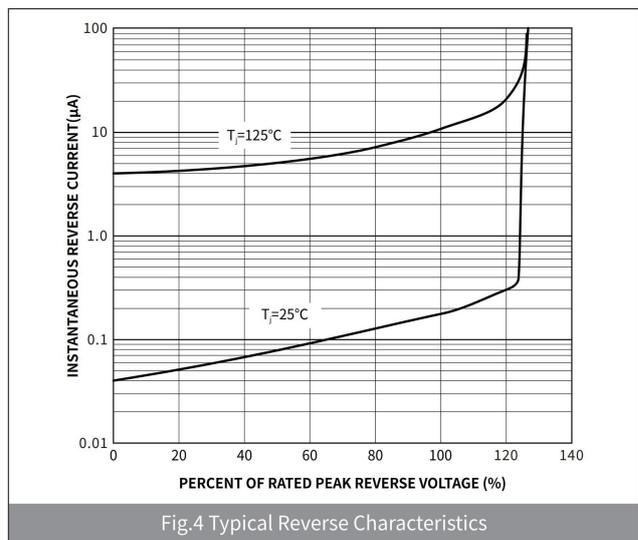
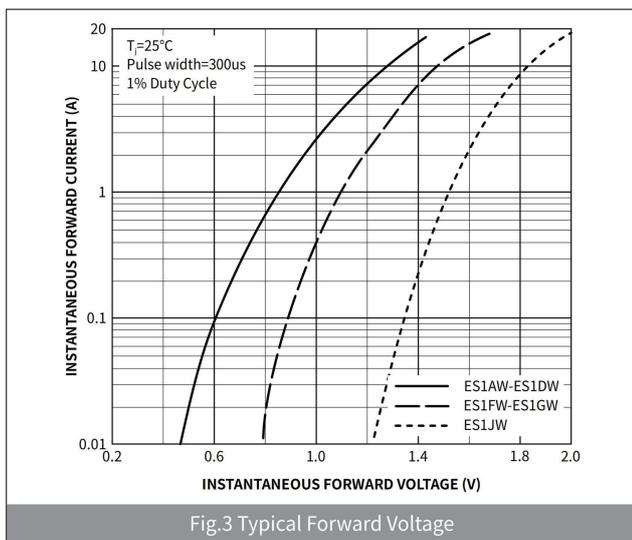
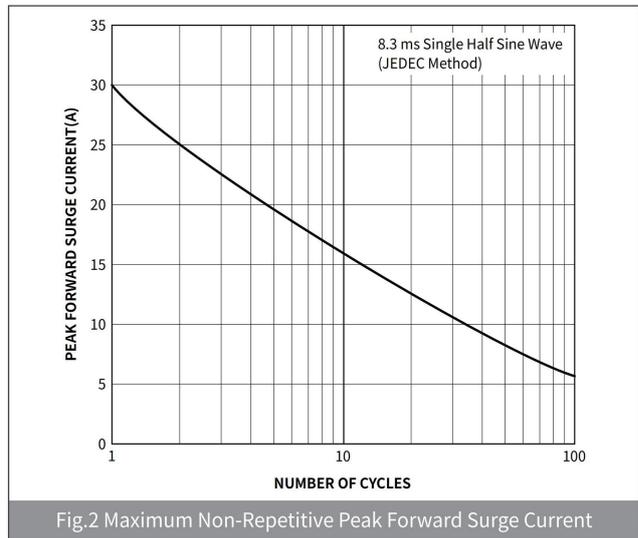
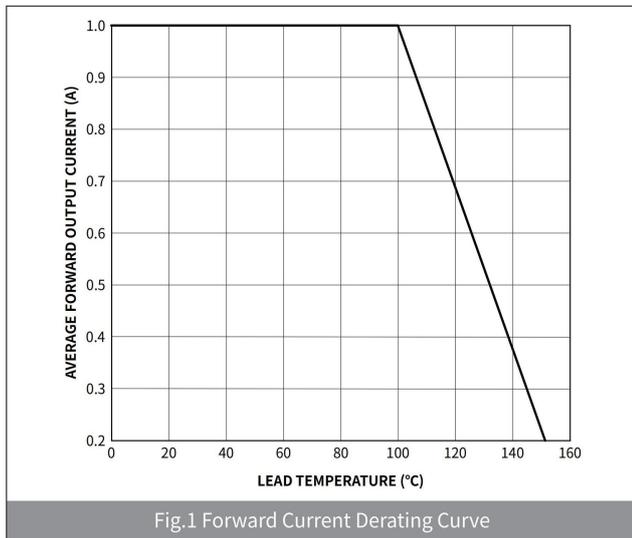
PARAMETER	SYMBOL	UNIT	ES1AW	ES1BW	ES1CW	ES1DW	ES1EW	ES1GW	ES1JW
Device marking code			E1	E2	E3	E4	E5	E6	E7
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	150	200	300	400	600
Maximum RMS Voltage	V_{RMS}	V	35	70	105	140	210	280	420
Maximum DC blocking Voltage	V_{DC}	V	50	100	150	200	300	400	600
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}	°C	-55 ~+150						
Junction temperature	T_j	°C	-55 ~+150						
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	85						
	$R_{\theta J-L}$	°C /W	35						

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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 current at rated DC blocking voltage	$V_R=V_{DC}, T_A=25^\circ C$	I_{R1}	μA	2.0						
	$V_R=V_{DC}, T_A=125^\circ C$	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)



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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

Suggested Pad Lavout

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