

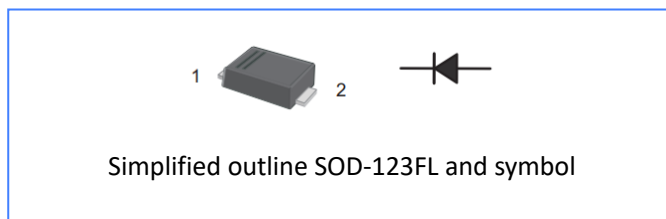
ES1AW THRU ES1JW

Features

- Easy pick and place
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Superfast recovery times for high efficiency

Mechanical Data

- Case:SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx.Weight: 15mg 0.00053oz



Pinning

PIN	DESCRIPTION
1	Cathode
2	Anode

Absolute Maximum Ratings And Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

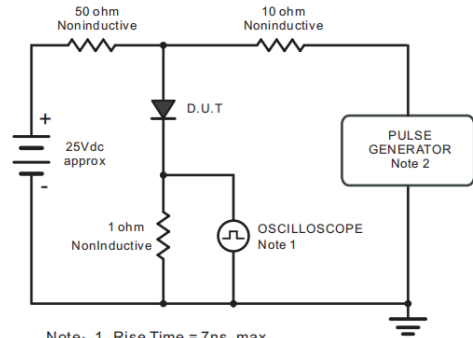
Parameter	Symbols	ES1AW	ES1BW	ES1CW	ES1DW	ES1EW	ES1GW	ES1JW	Units	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V	
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V	
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V	
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1							A	
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A	
Maximum Forward Voltage at 1 A	V_F	1.0				1.25		1.68	V	
Maximum DC Reverse Current $T_a = 25^\circ C$ at Rated DC Blocking Voltage $T_a = 125^\circ C$	I_R	5				100				μA
Typical Junction Capacitance at $V_R=4V$, $f=1MHz$	C_j	15							pF	
Maximum Reverse Recovery Time ⁽¹⁾	t_{rr}	35							ns	
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	85							$^\circ C/W$	
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							$^\circ C$	

(1) Measured with $I_F = 0.5 A$, $I_R = 1 A$, $I_{rr} = 0.25 A$

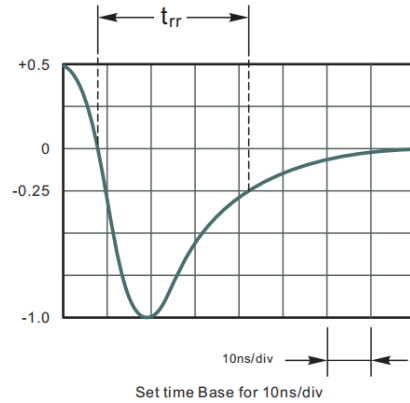
(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas

Rating And Characteristic Curves

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7ns, max.
Input Impedance = 1megohm, 22pF.
2. Rise Time = 10ns, max.
Source Impedance = 50 ohms.



Set time Base for 10ns/div

Fig.2 Maximum Average Forward Current Rating

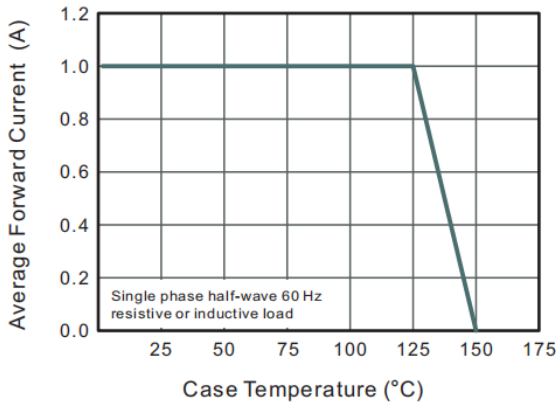


Fig.3 Typical Reverse Characteristics

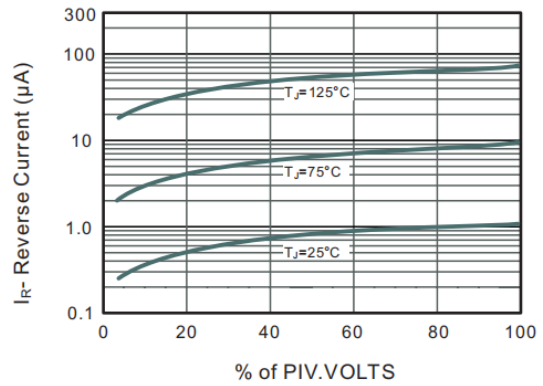


Fig.4 Typical Forward Characteristics

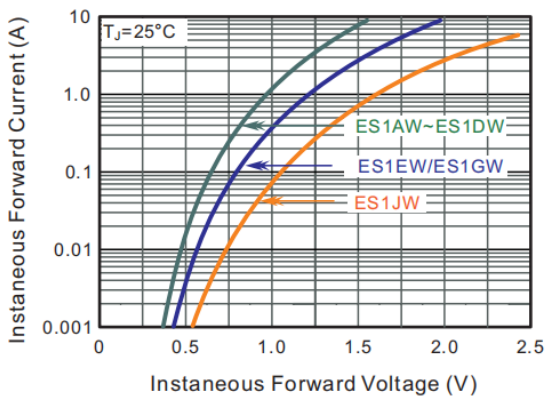


Fig.5 Typical Junction Capacitance

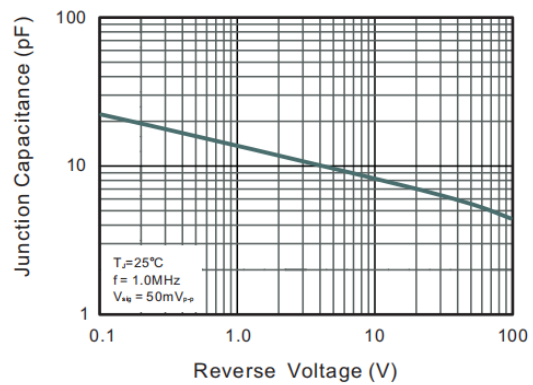
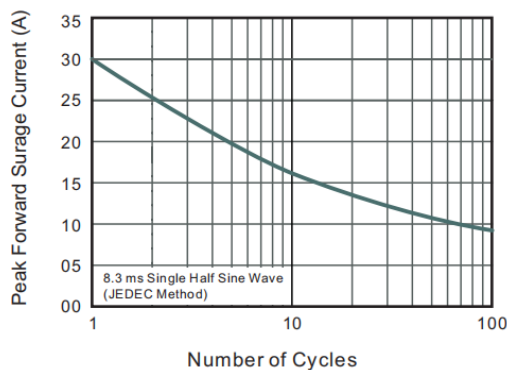


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



Package Outline

Plastic surface mounted package; 2 leads

SOD-123FL

Dimensions	Millimeter	
	Min	Max
A	2.50	3.10
B	3.40	3.90
C	0.70	1.20
D	1.50	2.00
E	0.35	0.90
F	0.05	0.26
G	0.00	0.10
H	0.90	1.25

The recommended mounting pad size

