

ES1AW THRU ES1JW

Surface Mount Superfast Recovery Rectifiers

Reverse Voltage - 50 to 600 V

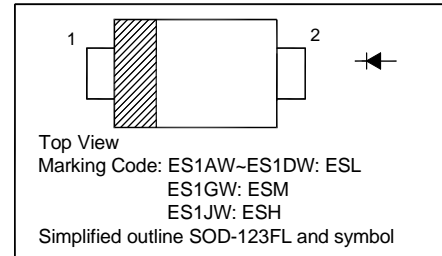
Forward Current - 1 A

Features

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

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



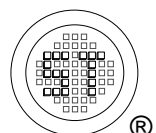
Absolute Maximum Ratings and Characteristics

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%.

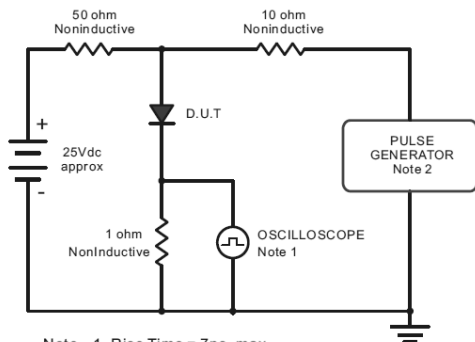
Parameter	Symbols	ES1AW	ES1BW	ES1DW	ES1GW	ES1JW	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	V
Maximum Average Forward Rectified Current T _C = 125°C	I _{F(AV)}	1					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			1.3	1.7	V
Maximum Reverse Current at T _a = 25°C at Rated DC Blocking Voltage at T _a = 125 °C	I _R	5 100					μA
Typical Junction Capacitance at V _R = 4 V, f = 1 MHz	C _J	15					pF
Maximum Reverse Recovery Time at I _F = 0.5 A, I _R = 1 A, I _{rr} = 0.25 A	t _{rr}	35					ns
Typical Thermal Resistance ¹⁾	R _{θJA}	85					°C/W
Typical Thermal Resistance	R _{θJC}	15					°C/W
Operating Junction and Storage Temperature Range	T _j , T _{stg}	- 55 to + 150					°C

¹⁾ P.C.B. mounted with 2.0 X 2.0" (5 X 5 cm) copper pad areas.



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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.

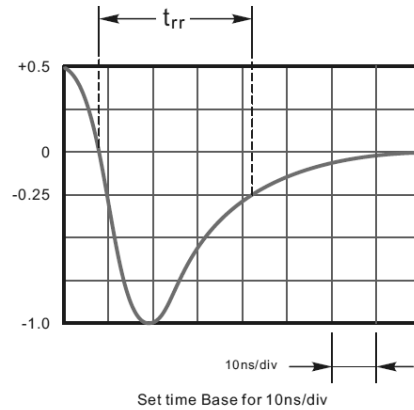


Fig.2 Maximum Average Forward Current Rating

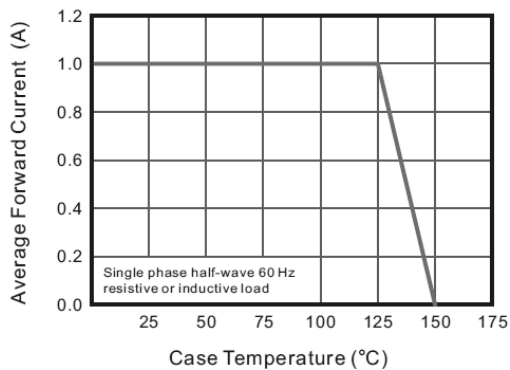


Fig.3 Typical Reverse Characteristics

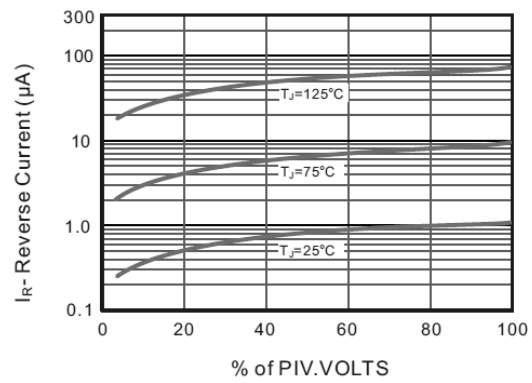


Fig.4 Typical Forward Characteristics

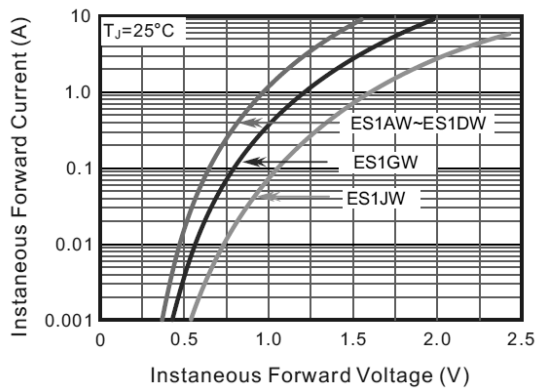


Fig.5 Typical Junction Capacitance

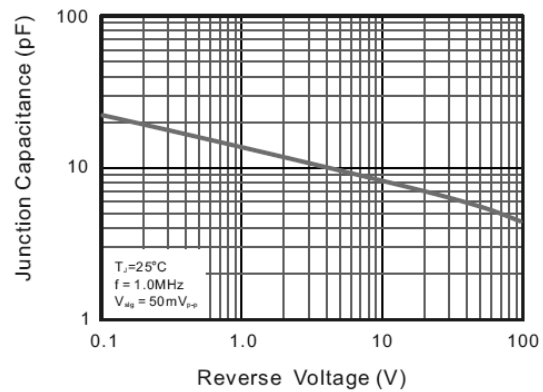
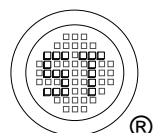
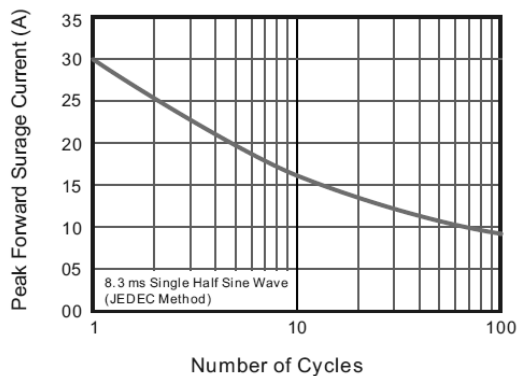


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current

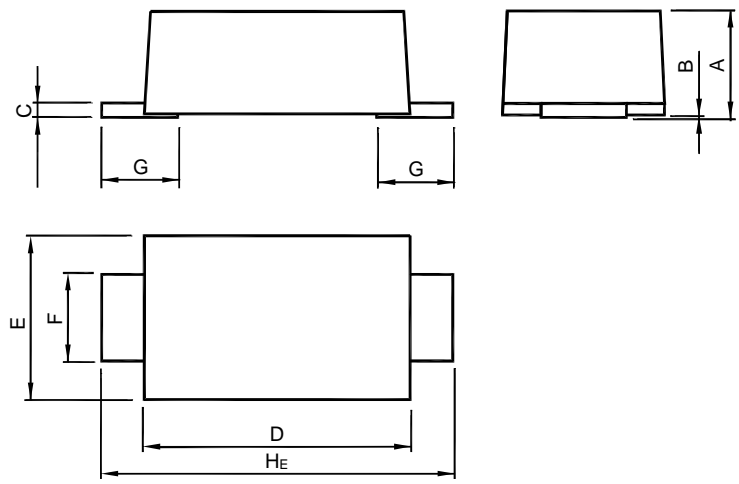


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PACKAGE OUTLINE

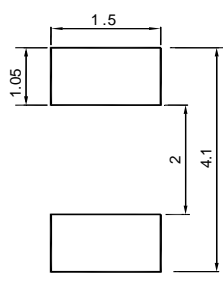
Plastic surface mounted package; 2 leads

SOD-123FL



UNIT	A	B	C	D	E	F	G	H _E
mm	1.08 0.88	0.1 0	0.2 0.1	2.9 2.7	1.9 1.7	1.1 0.8	0.85 0.45	3.9 3.5

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-123FL	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" III " = Cathode line

" *** " = Part No.

Font type: Arial

