

Surface Mount Superfast Recovery Rectifier
Reverse Voltage – 50 to 600 V
Forward Current – 2 A
FEATURES

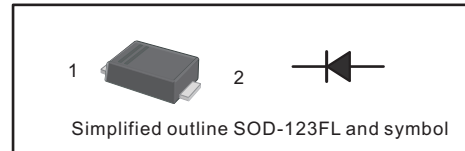
- Easy pick and place
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Superfast recovery times for high efficiency

MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg 0.00048oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode


Absolute Maximum Ratings and Characteristics

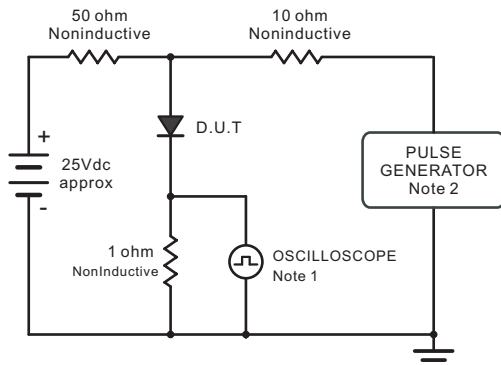
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	ES2AW	ES2BW	ES2CW	ES2DW	ES2EW	ES2GW	ES2JW	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 at T _L = 75 °C	I _{F(AV)}	2							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	50							A
Maximum Forward Voltage at 2 A	V _F	1				1.25		1.7	V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta =125 °C	I _R	5 100							μA
Typical Junction Capacitance at V _R =4V, f=1MHz	C _J	62							pF
Maximum Reverse Recovery Time at I _F =0.5A, I _R =1A, I _{rr} =0.25A	t _{rr}	35							ns
Typical Thermal Resistance ¹⁾	R _{θJA}	40							°C/W
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150							°C

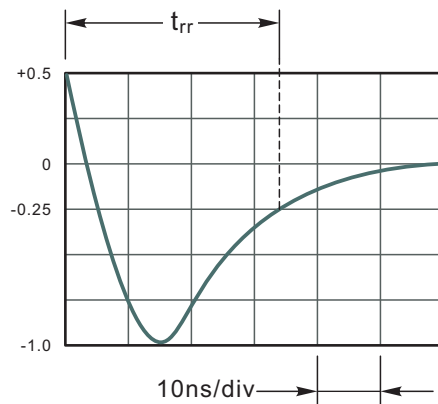
1) P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas



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

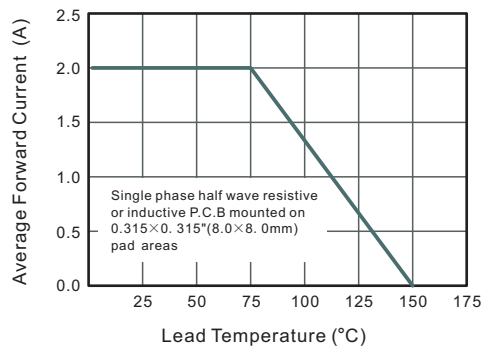


Fig.3 Typical Reverse Characteristics

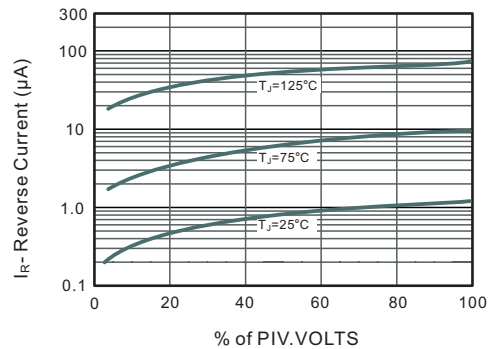


Fig.4 Typical Forward Characteristics

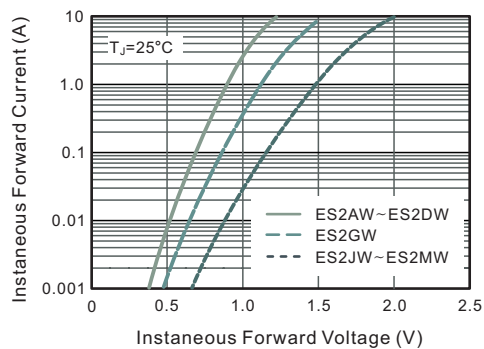
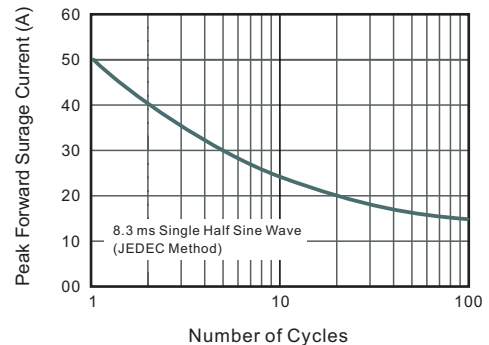


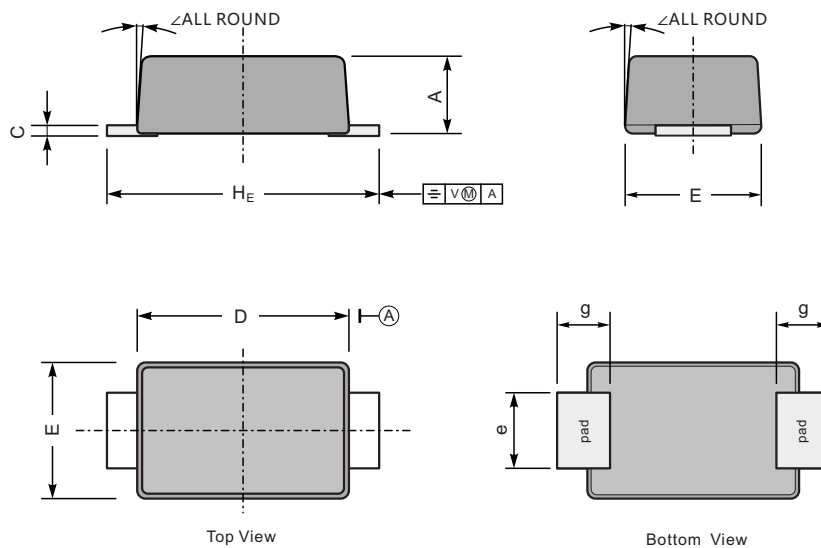
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



PACKAGE OUTLINE

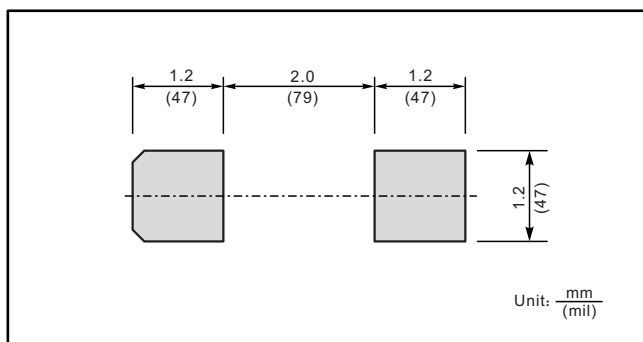
Plastic surface mounted package; 2 leads

SOD-123FL



UNIT		A	C	D	E	e	g	H _E	∠
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	

The recommended mounting pad size



Marking

Type number	Marking code
ES2AW	E2L
ES2BW	
ES2CW	
ES2DW	
ES2EW	E2M
ES2GW	
ES2JW	E2H