ES1AW - ES1JW

Voltage Range - 50 to 600 V

Forward Current - 1 Ampere

SURFACE MOUNT SUPER FAST RECOVERY RECTIFIER

FEATURES

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

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

Simplified outline SOD-123FL and symbol

MECHANICAL DATA

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °Cambient 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 at T_L = 100 °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				1.25		1.68	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	10							pF
Maximum Reverse Recovery Time [1]	t_{rr}	35							ns
Typical Thermal Resistance [2]	$R_{\theta JA}$	120							°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							°C

Notes :

1. Measured with IF = 0.5 A, IR= 1= 1 A, Irr = 0.25 A
2. P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas.

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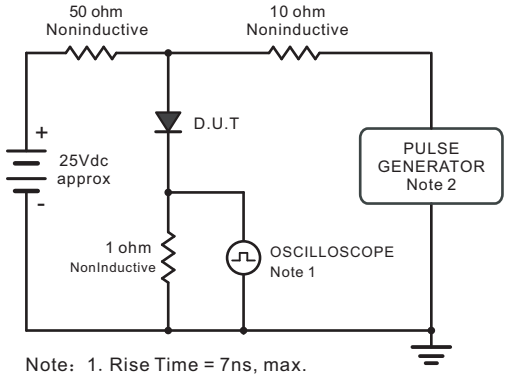
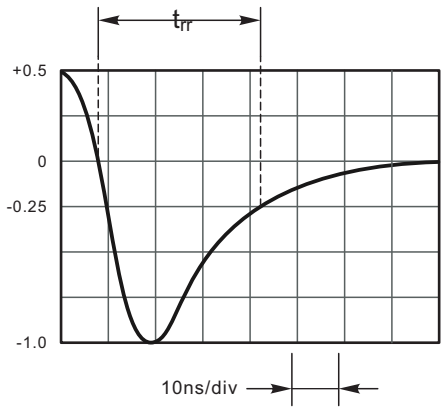
Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



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



Set time Base for 10ns/div

Fig.2 Maximum Average Forward Current Rating

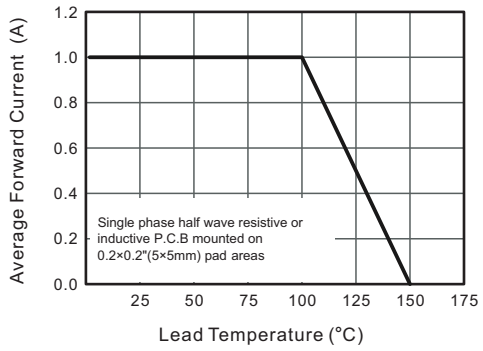


Fig.3 Typical Reverse Characteristics

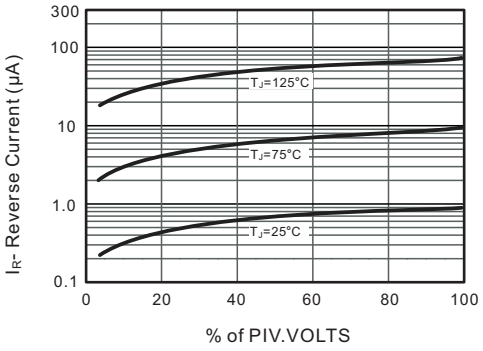


Fig.4 Typical Forward Characteristics

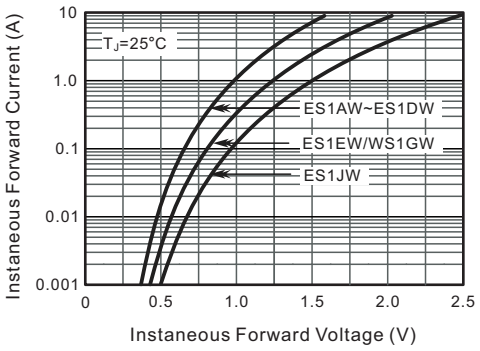


Fig.5 Typical Junction Capacitance

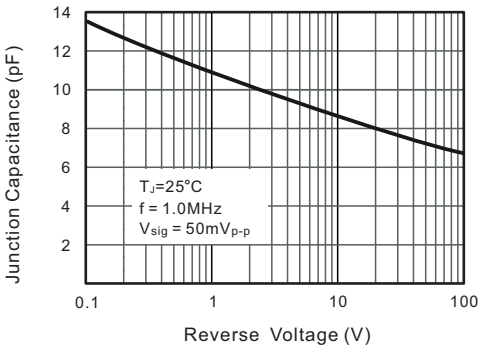
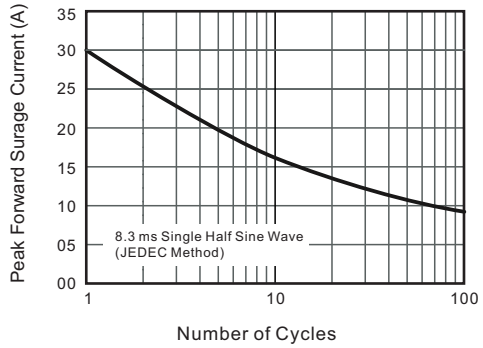


Fig.6 Maximum Non-Repetitive Peak Forward Surage Current



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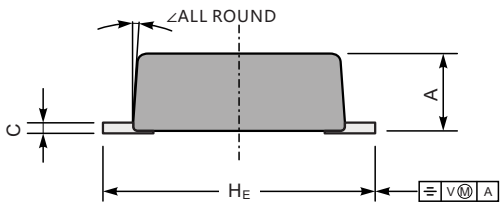
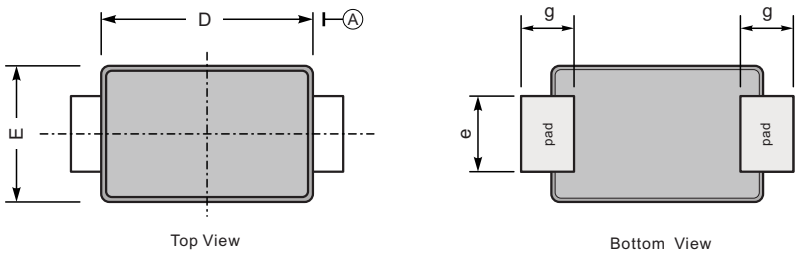
SURFACE MOUNT SUPER FAST RECOVERY RECTIFIER

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

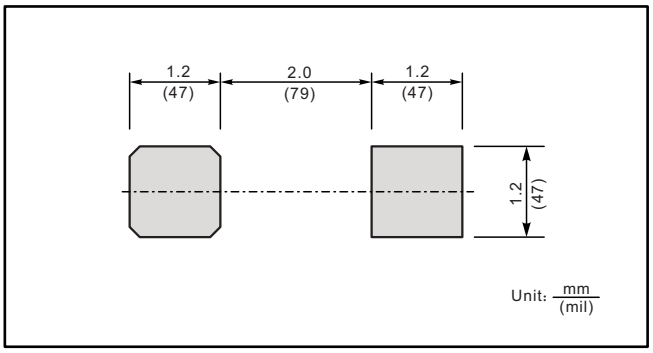
SOD-123FL





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
ES1AW	ESL
ES1BW	
ES1CW	
ES1DW	
ES1EW	ESM
ES1GW	
ES1JW	ESH

Disclaimer

All product, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.

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