DESCRIPTION

The ES1AW~ES1JW are available in SOD-123FL package

FEATURES

- Easy pick and place
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Superfast recovery times for high efficiency
- Available in SOD-123FL package

ORDERING INFORMATION

Package Type	Part Number
SOD-123FL	ES1AW
	ES1BW
	ES1CW
	ES1DW
	ES1EW
	ES1GW
	ES1JW
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

MECHANICAL DATA

Case: SOD-123FL

Terminals: Solderable per MIL-STD-750, Method 2026

Approx. Weight:15mg 0.00053oz

PIN DESCRIPTION

ABSOLUTE MAXIMUM RATINGS AND ELECTRICAL 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%

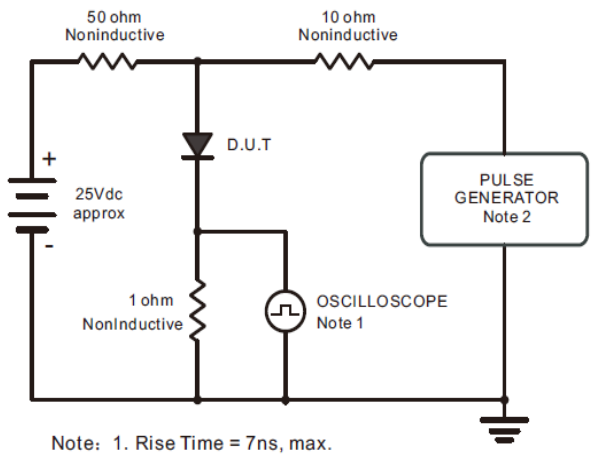
Parameter		Symbol	ES1AW	ES1BW	ES1CW	ES1DW	ES1EW	ES1GW	ES1JW	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage		V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage		V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at T_C=125°C		$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load		I_{FSM}	30							A
Maximum Forward Voltage at 1A		V_F	1				1.25		1.68	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_A=25°C	I_R	5							uA
	T_A=125°C		100							
Typical Junction Capacitance at V_R=4V, f=1MHz		C_J	15							pF
Maximum Reverse Recovery Time[NOTE1]		t_{rr}	35							ns
Typical Thermal Resistance[NOTE2]		$R_{\theta JA}$	85							°C/W
Operating and Storage Temperature Range		T_J, T_{STG}	-55 ~150							°C

NOTE1: Measured with I_F = 0.5 A, I_R = 1A, I_{rr} = 0.25A

NOTE2: P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

TYPICAL CHARACTERISTICS

Figure. 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.

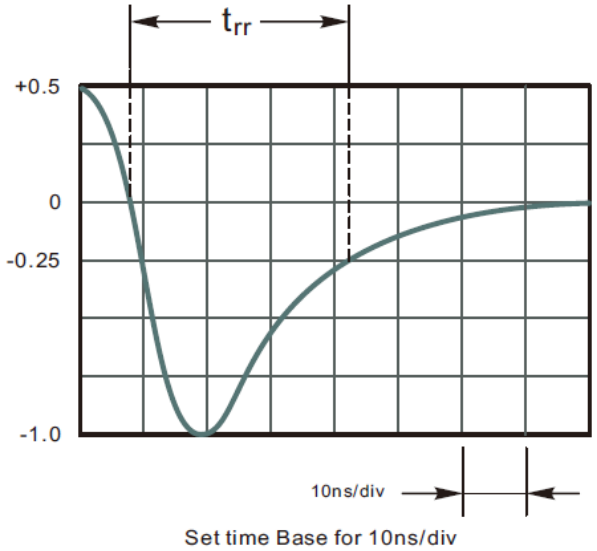


Figure. 2 Maximum Average Forward Current Rating

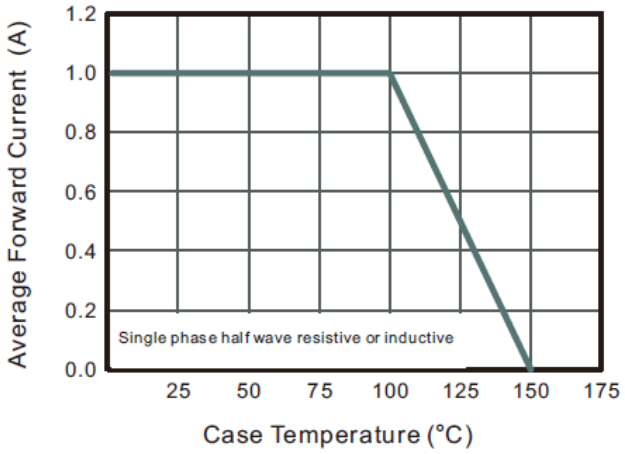


Figure. 3 Typical Reverse Characteristics

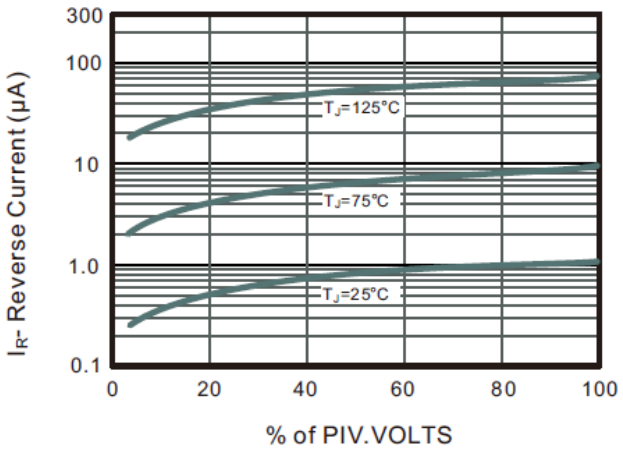


Figure. 4 Typical Forward Characteristics

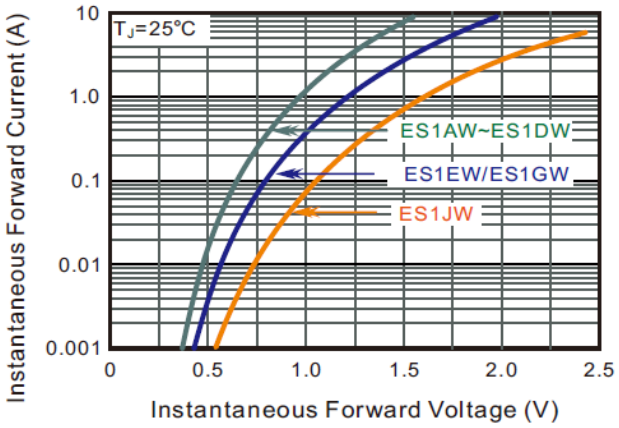


Figure. 5 Typical Junction Capacitance

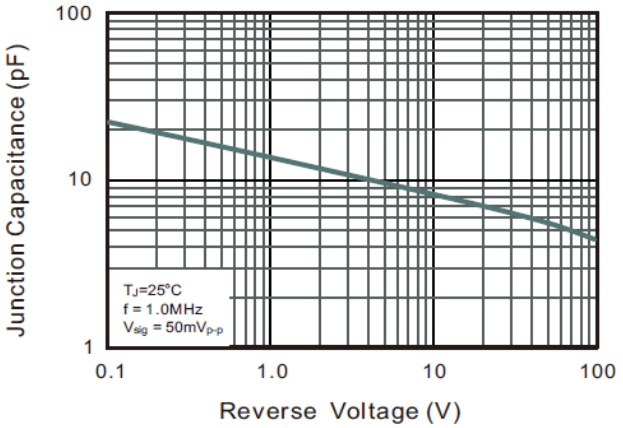
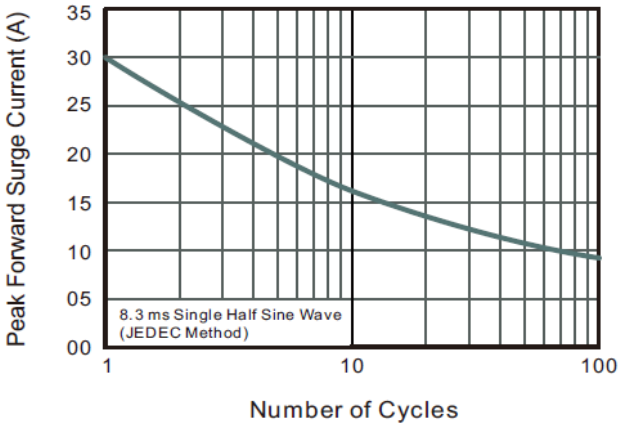


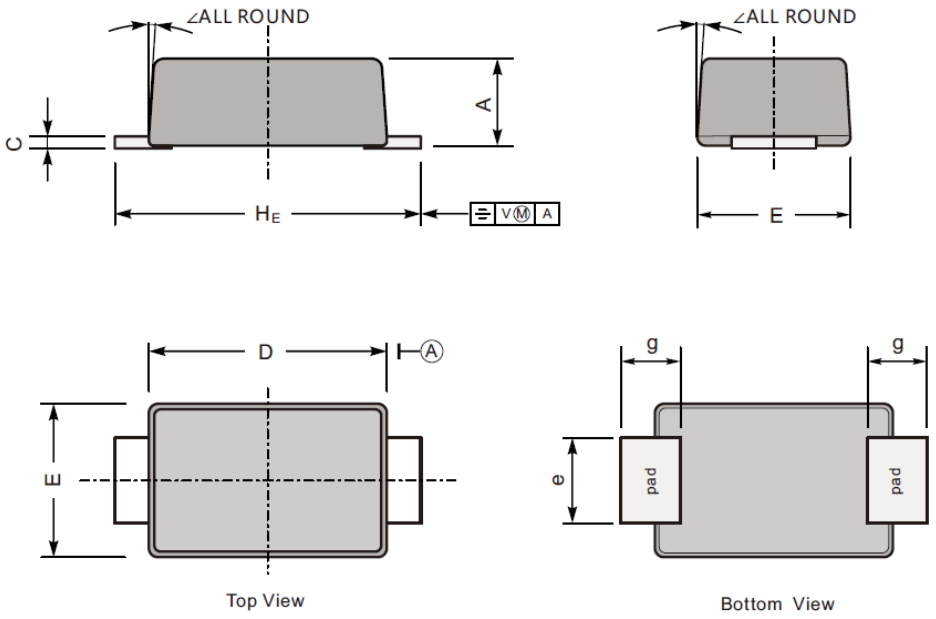
Figure. 6 Maximum Non-Repetitive Peak Forward Surge Current



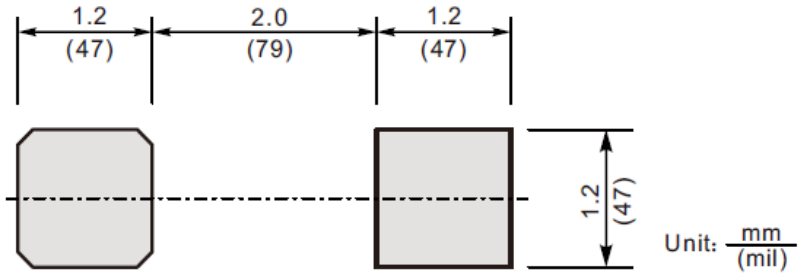
PACKAGE INFORMATION

Dimension in SOD-123FL(Unit: mm)

Plastic surface mounted package; 2 leads



The recommended mounting pad size



UNIT		A	C	D	E	e	g	HE	∠
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	

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