

Descriptions

Surface Mount Superfast Recovery Rectifiers, Reverse Voltage: 50 to 600V, Forward Current: 1.0A, SOD-123FL thin package.

Features

Superfast recovery times for high efficiency, Lead free in comply with EU RoHS 2011/65/EU directives, For surface mounted applications. Halogen free product.

Applications

General purpose.

Equivalent Circuit & Pinning



PIN	DESCRIPTION
1	Cathode
2	Anode

SOD-123FL

Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating							Unit
		ES1AW	ES1BW	ES1CW	ES1DW	ES1EW	ES1GW	ES1JW	
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 $T_L = 100^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Typical Junction Capacitance at $V_R=4V$, $f=1\text{MHz}$	C_j	10							pF
Typical Thermal Resistance ¹⁾	$R_{\theta JA}$	120							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55~+150							$^\circ\text{C}$

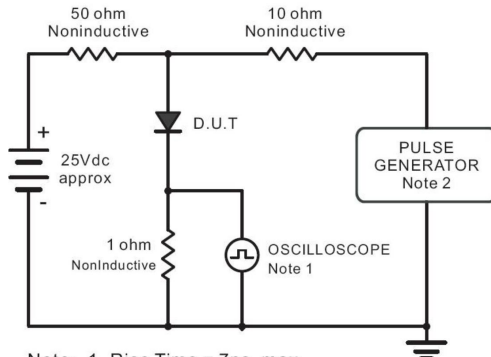
Note:

1) P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas.

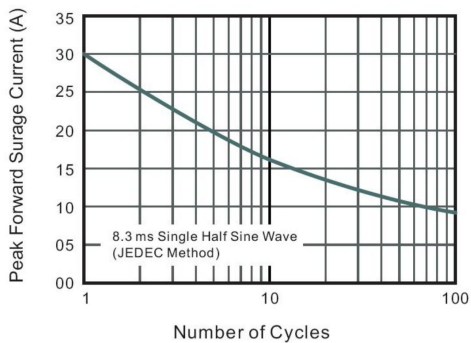
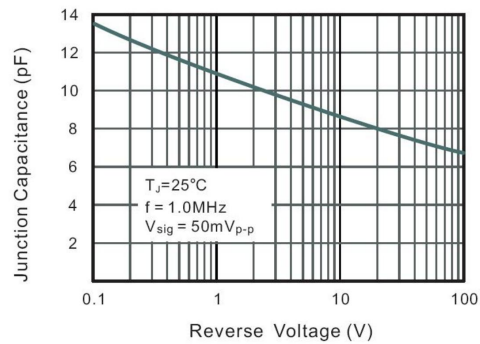
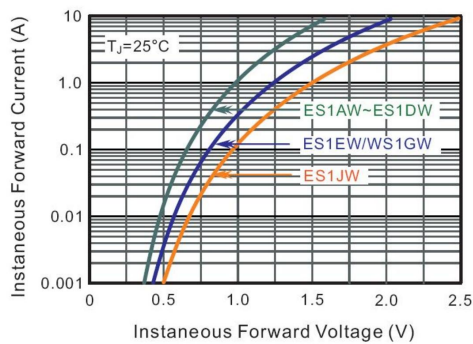
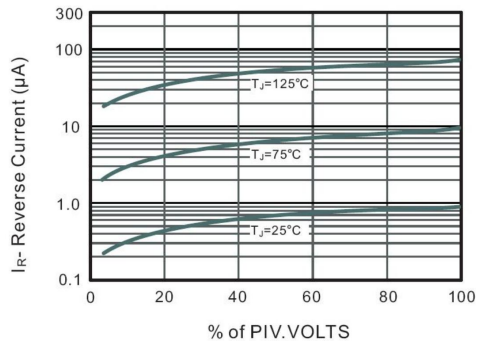
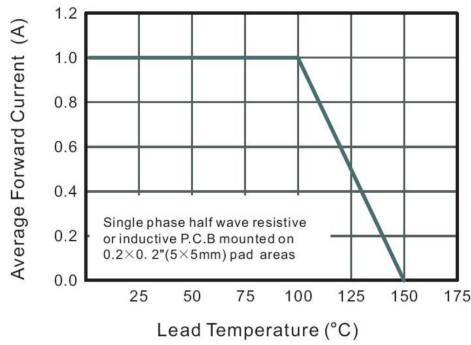
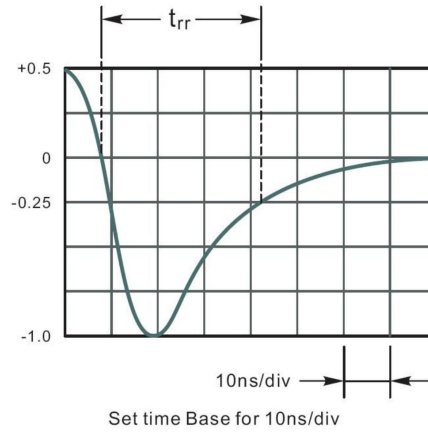
Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Rating							Unit
			ES1AW	ES1BW	ES1CW	ES1DW	ES1EW	ES1GW	ES1JW	
Maximum Forward Voltage	V _F	I _F =1.0A	1.0				1.25		1.68	V
Maximum DC Reverse Current at Maximum DC Blocking Voltage	I _R	T _a =25℃	5.0							μA
		T _a =125℃	100							μA
Maximum Reverse Recovery Time	T _{rr}	I _F =0.5A I _R =1A I _{rr} =0.25A	35							ns

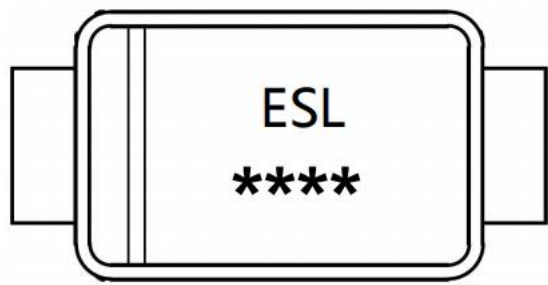
Electrical Characteristic Curve



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



Marking Instructions



Type number	Marking code
ES1AW	ESL
ES1BW	
ES1CW	
ES1DW	
ES1EW	ESM
ES1GW	
ES1JW	ESH

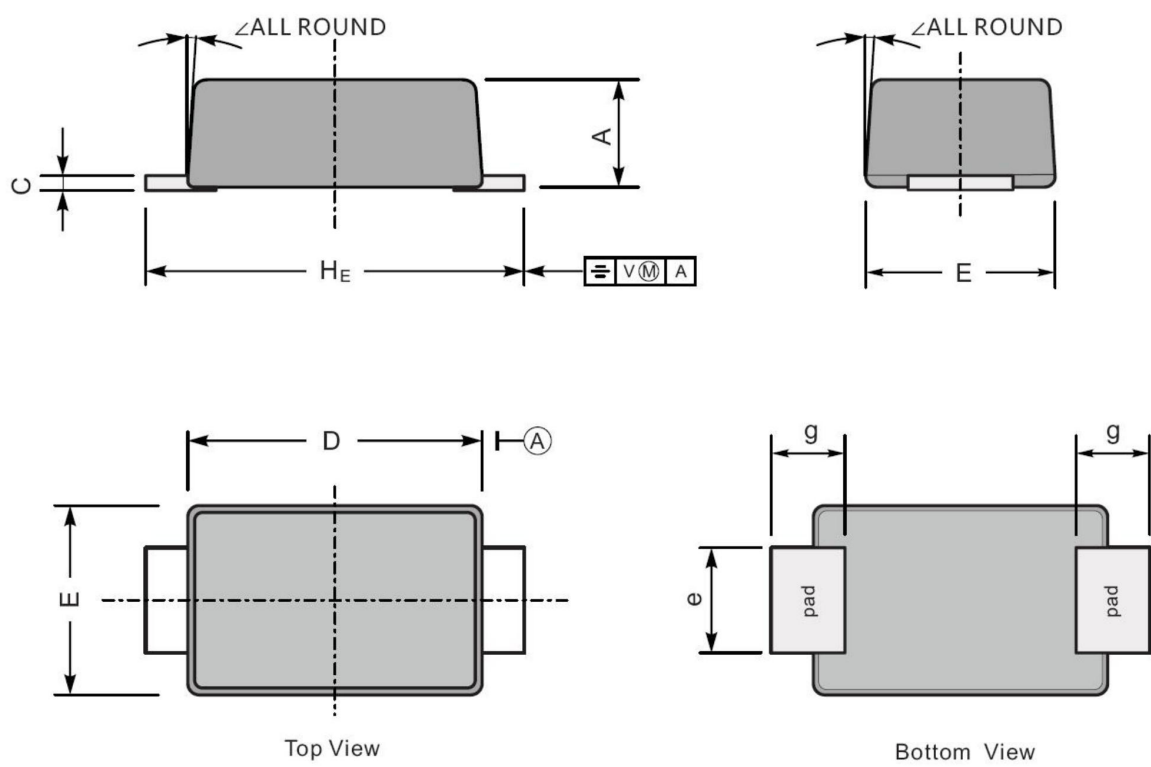
Note:
ESL: Product Type Code
****: Lot No. Code, The 1st * means:YM Code, The last 3 * means:little Lot No Code

Packaging SPEC

Package Type	Units					Dimension (unit: mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOD-123FL	3000	8	24000	5	120000	7" ×11	185X180X105	390X385X205

Package Outline Dimensions

SOD-123FL



UNIT		A	C	D	E	e	g	H _E	$\angle$
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	