

**Surface Mount Superfast Recovery Rectifier**
**Reverse Voltage – 50 to 600 V**
**Forward Current – 0.5 A**
**FEATURES**

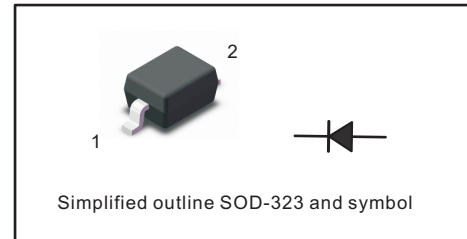
- Easy pick and place
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Superfast recovery times for high efficiency

**MECHANICAL DATA**

- Case: SOD-323
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 5.48mg / 0.00019oz

**PINNING**

PIN	DESCRIPTION
1	Cathode
2	Anode

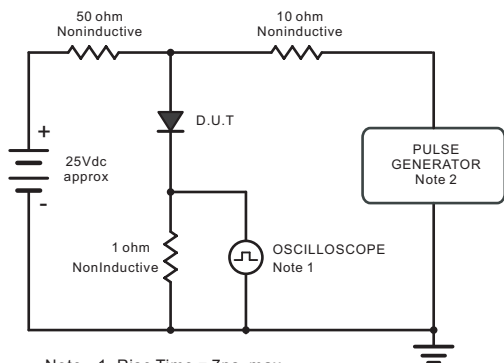

**Absolute Maximum Ratings and Characteristics**

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%.

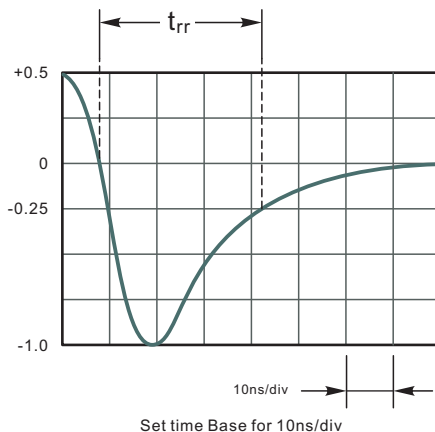
Parameter	Symbols	ES1ALWS	ES1BLWS	ES1CLWS	ES1DLWS	ES1ELWS	ES1GLWS	ES1JLWS	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	V
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at $T_c = 125\text{ °C}$	$I_{F(AV)}$	0.5							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	15							A
Maximum Forward Voltage at 0.5 A	$V_F$	1			1.25		1.68		V
Maximum DC Reverse Current $T_a = 25\text{ °C}$ at Rated DC Blocking Voltage $T_a = 125\text{ °C}$	$I_R$	5 100							$\mu\text{A}$
Typical Junction Capacitance at $V_R = 4\text{V}$ , $f = 1\text{MHz}$	$C_j$	15							pF
Maximum Reverse Recovery Time <sup>(1)</sup>	$t_{rr}$	35							ns
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150							$^{\circ}\text{C}$

( 1 ) Measured with  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .

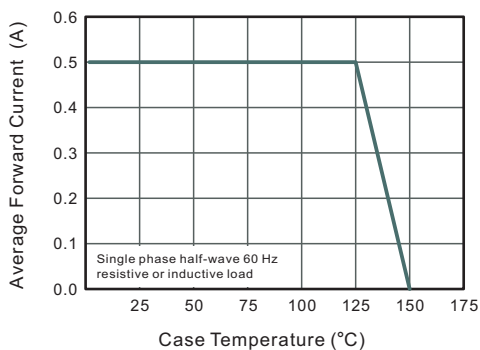
**Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram**



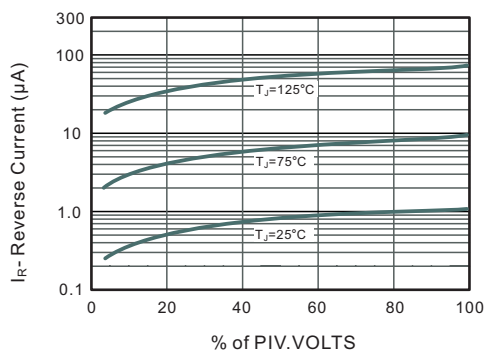
Note: 1. Rise Time = 7ns, max.  
Input Impedance = 1megohm, 22pF.  
2. Rise Time = 10ns, max.  
Source Impedance = 50 ohms.



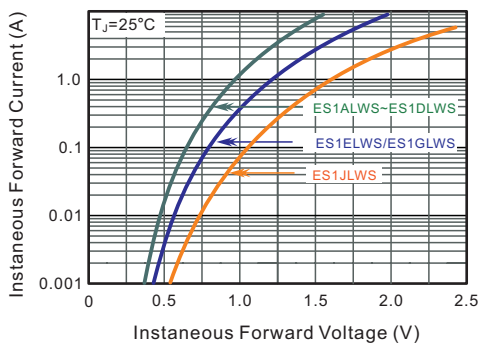
**Fig.2 Maximum Average Forward Current Rating**



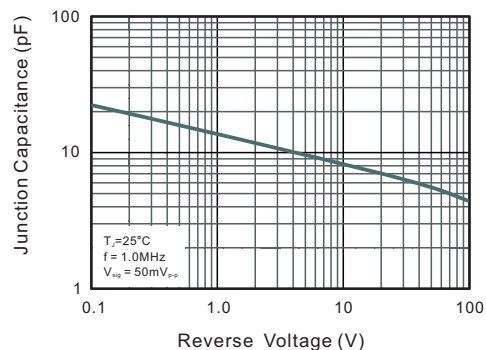
**Fig.3 Typical Reverse Characteristics**



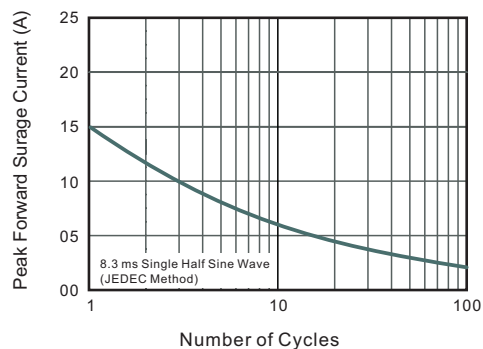
**Fig.4 Typical Forward Characteristics**



**Fig.5 Typical Junction Capacitance**

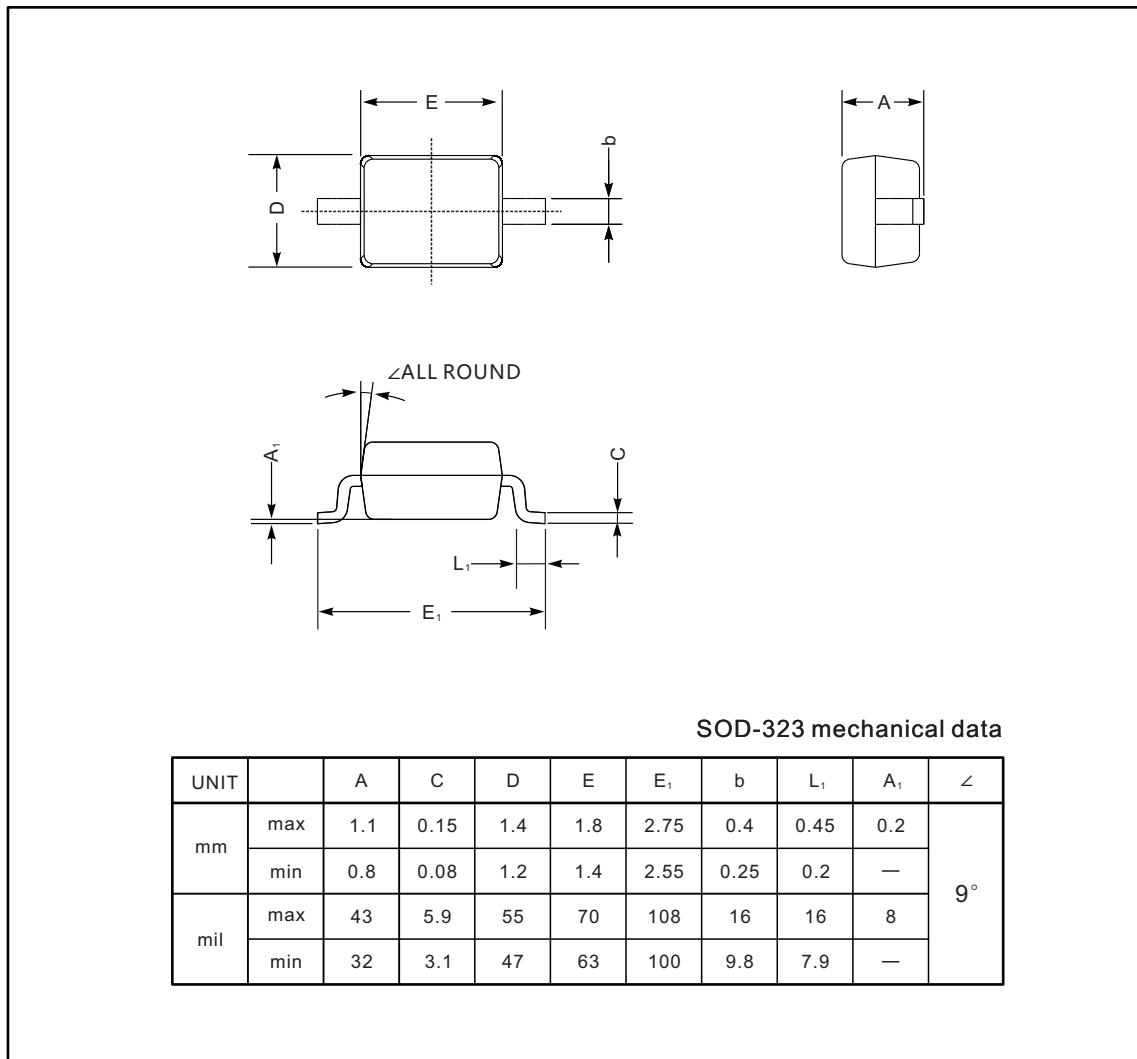
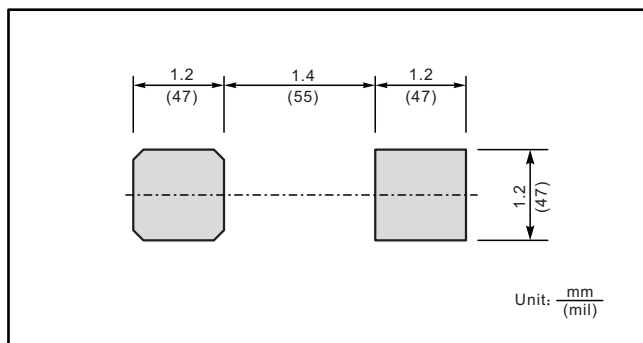


**Fig.6 Maximum Non-Repetitive Peak Forward Surge Current**



**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

**SOD-323**

**The recommended mounting pad size**

**Marking**

Type number	Marking code
ES1ALWS	ESL
ES1BLWS	
ES1CLWS	
ES1DLWS	
ES1ELWS	ESM
ES1GLWS	
ES1JLWS	ESH