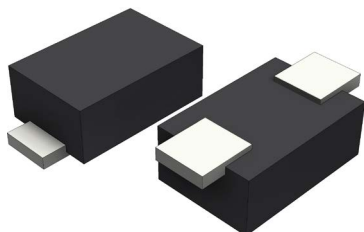


RoHS  
Compliant



## Features

- For surface mounted applications
- Low reverse leakage current
- Low forward voltage drop
- High surge capacity
- Meet UL flammability classification 94V-0

## Mechanical Data

- Case: JEDEC SOD-123FL molded plastic
- Polarity: Colour band denotes cathode
- Mounting position: Any

## Applications

- For use in low voltage, high frequency inverters, polarity protection applications

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristics	Symbol	S1JL	S1ML	Unit
	Marking	S1JL	S1ML	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	600	1000	V
Maximum RMS Voltage	$V_{RMS}$	420	700	
Maximum DC Blocking voltage	$V_{DC}$	600	1000	
Maximum Average Forward Rectified Current @ $T_L=100^\circ\text{C}$	$I_{(AV)}$	1		A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	25		
$I^2t$ Rating for Fusing ( $t < 8.3\text{mS}$ )	$I^2t$	2.6		$\text{A}^2\text{s}$
Peak Forward Voltage at 1.0A DC (Note1)	$V_F$	1.1		V
Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_J=125^\circ\text{C}$	$I_R$	5		$\mu\text{A}$
		50		
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	35		nS
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	150		$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_J$	-55 to +150		$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150		

NOTE: 1. 300uS pulse width, 2% duty cycle.

2. Mounted on FR-4 P.C.B. With 0.9mm × 1.5mm copper pad areas ( $\approx 35 \mu\text{m}$  thick)

3. The typical data above is for reference only .

## Rating and Characteristic Curves

Fig. 1 - Forward Current Derating Curve

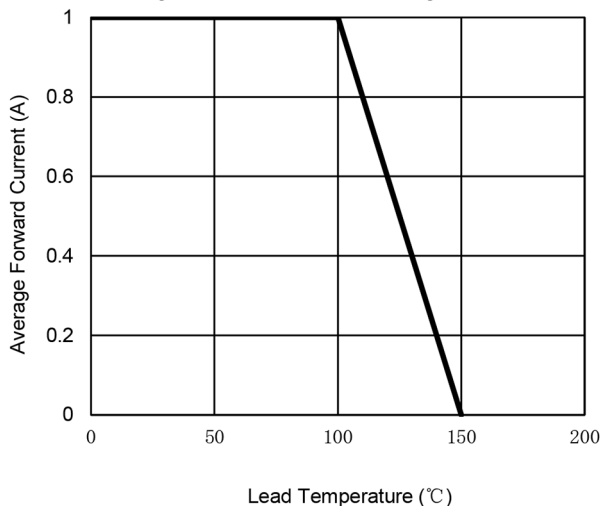


Fig. 2 - Maximum Non-Repetitive Surge Current

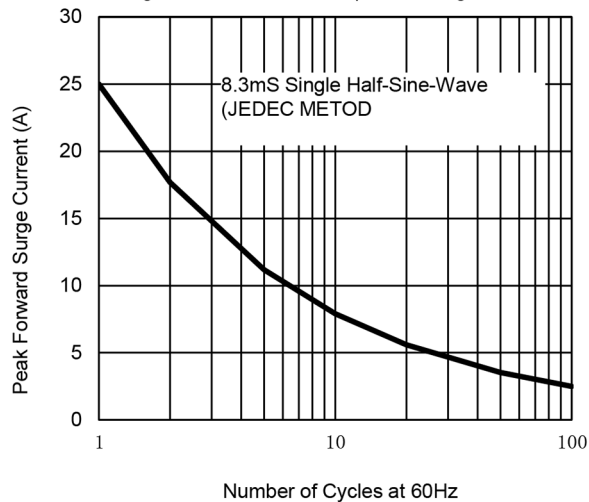


Fig. 3 - Typical Reverse Characteristics

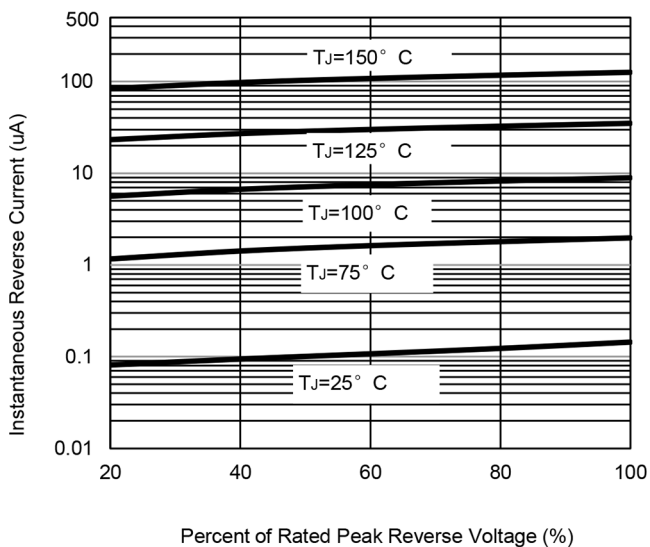
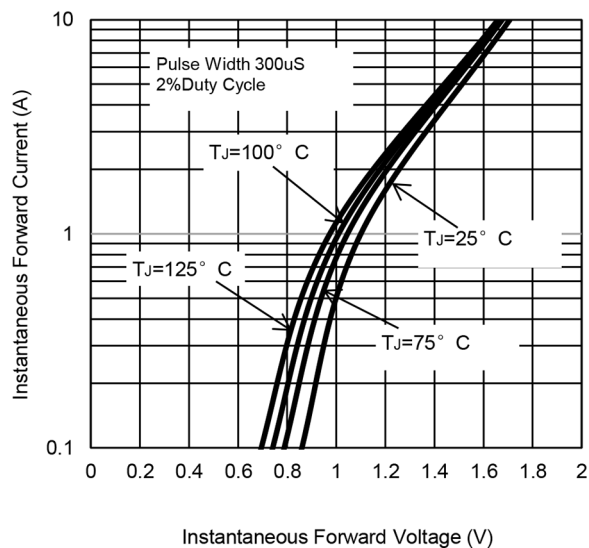
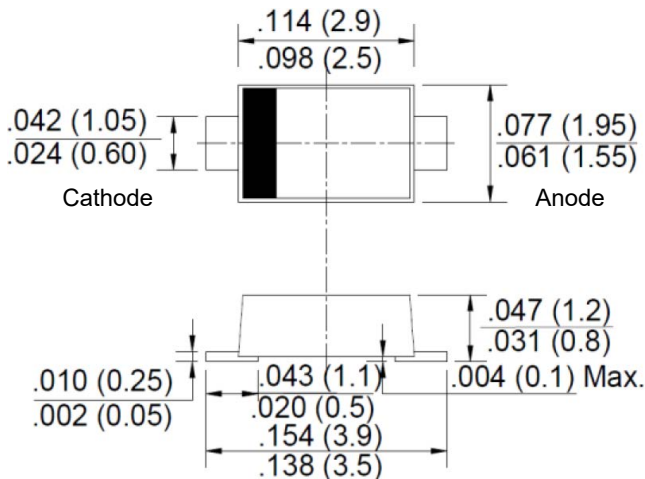


Fig. 4 - Typical Forward Characteristics



## Packaging Dimensions



### SOD-123FL

Dimensions : Inches (Millimetres)

## Part Number Table

Description	Part Number
Rectifier Diode, 1A, 600V, SOD-123FL	S1JL
Rectifier Diode, 1A, 1000V, SOD-123FL	S1ML

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