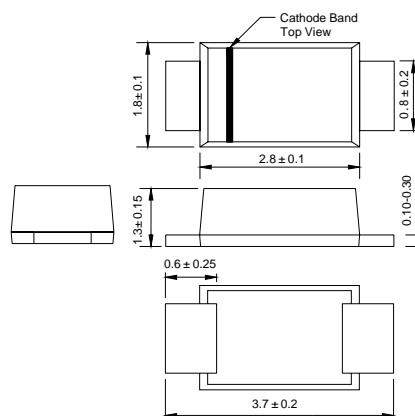


# FR101W - FR107W-ML (F1 - F7)

**SOD-123FL**


Dimensions in millimeters

## Features

- Glass passivated junction.
- For surface mounted applications.
- Built in strain relief, ideal for automated placement.

## 1.0 Ampere Fast Recovery Rectifiers

### Absolute Maximum Ratings\*

 $T_A = 25^\circ\text{C}$  unless otherwise noted

Symbol	Parameter	Value	Units
$I_o$	Average Rectified Current @ $T_A = 100^\circ\text{C}$	1.0	A
$i_{f(\text{surge})}$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	30	A
$P_D$	Total Device Dissipation Derate above $25^\circ\text{C}$	1.19	W
		9.5	mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient **	105	$^\circ\text{C}/\text{W}$
$R_{\theta JC}$	Thermal Resistance, Junction to Case **	32	$^\circ\text{C}/\text{W}$
$T_{\text{stg}}$	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-55 to +150	$^\circ\text{C}$

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

\*\* Device mounted on FR-4 PCB 0.013 mm.

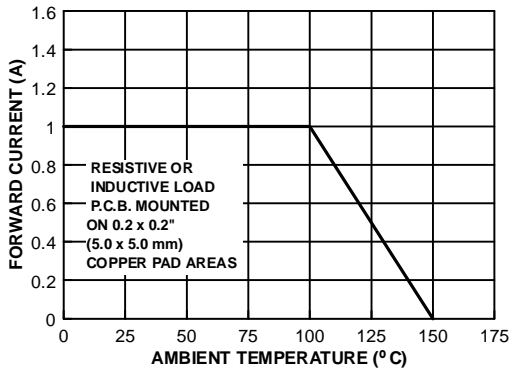
### Electrical Characteristics

 $T_A = 25^\circ\text{C}$  unless otherwise noted

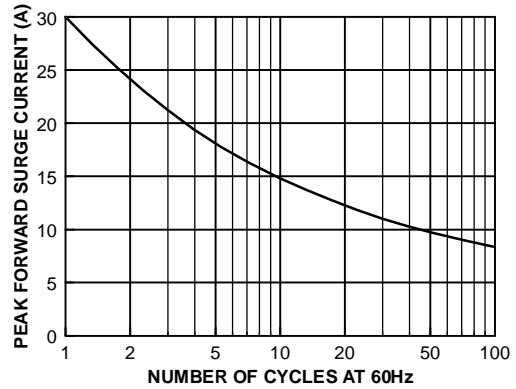
Parameter	Device							Units	
	F1	F2	F3	F4	F5	F6	F7		
Peak Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	35	70	140	280	420	560	700	V	
DC Reverse Voltage (Rated $V_R$ )	50	100	200	400	600	800	1000	V	
Maximum Reverse Current @ rated $V_R$								5.0	$\mu\text{A}$
								50	$\mu\text{A}$
Maximum Forward Voltage @ 1.0 A								1.3	V
Maximum Reverse Recovery Time $I_F = 0.5 \text{ A}$ , $I_R = 1.0 \text{ A}$ , $I_{\text{rr}} = 0.25 \text{ A}$	150			250		500		nS	
Typical Junction Capacitance $V_R = 4.0 \text{ V}$ , $f = 1.0 \text{ MHz}$	10							pF	

Typical Characteristics

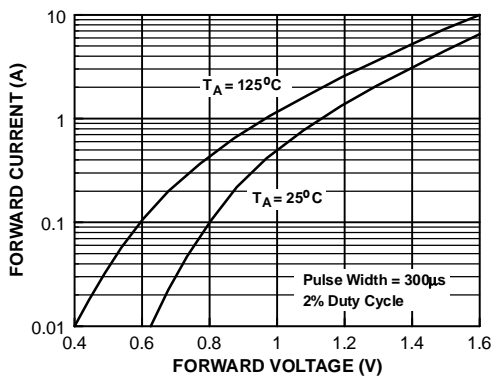
Forward Current Derating Curve



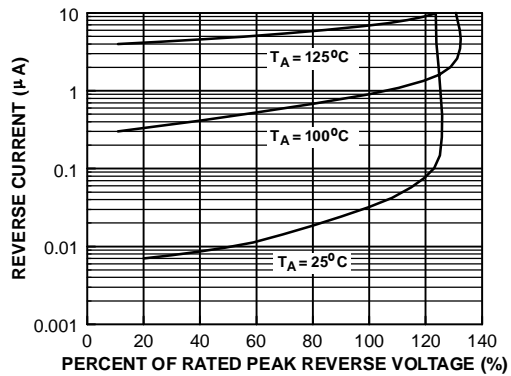
Non-Repetitive Surge Current



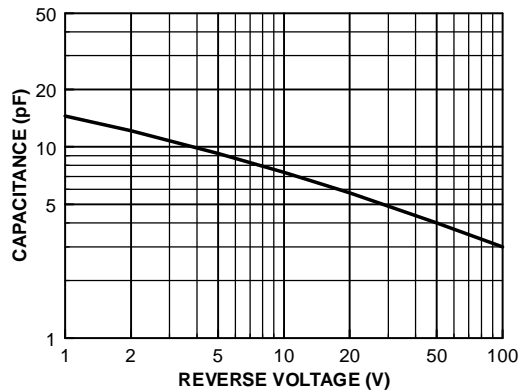
Forward Characteristics



Reverse Characteristics



Junction Capacitance



**Disclaimer**

The information presented in this document is for reference only. MOSLEADER reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), MOSLEADER or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.