

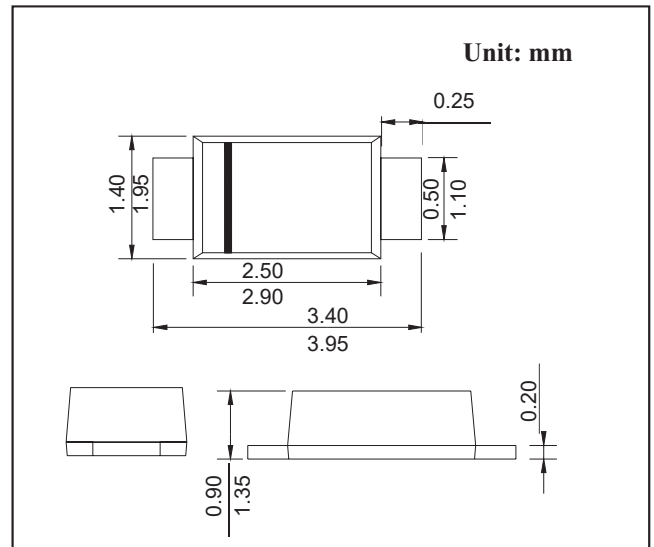
## SOD123FL PLASTIC SILICON RECTIFIERS

### FEATURES

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time
- Lead free in comply with EU RoHS 2015/863 directives

### MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg 0.00053oz



### MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

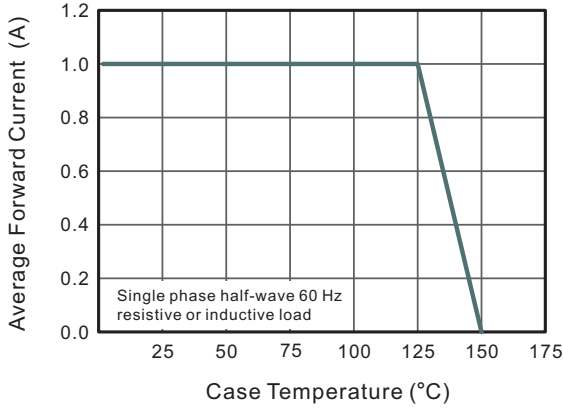
Parameter	Symbols	FR101W	FR102W	FR103W	FR104W	FR105W	FR106W	FR107W	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_c = 125^\circ\text{C}$	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	30							A
Maximum Forward Voltage at 1 A	$V_F$	1.3							V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125^\circ\text{C}$	$I_R$	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>	$t_{rr}$	150				250	500		ns
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	85							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150							$^\circ\text{C}$

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

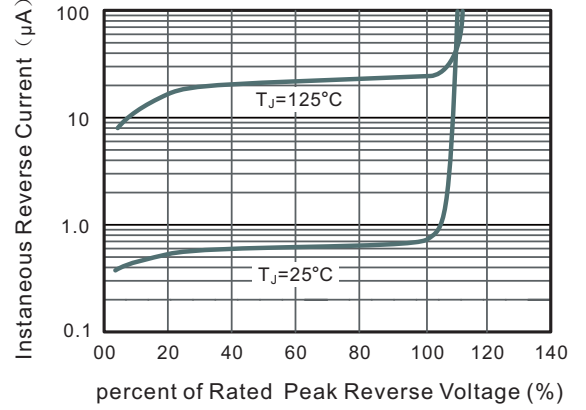
(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

## RATINGS AND CHARACTERISTIC CURVES

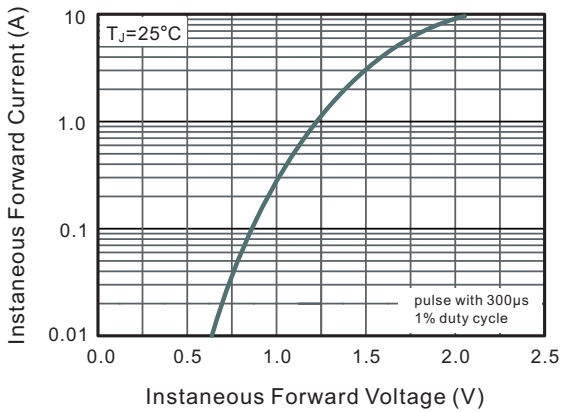
**Fig.1 Forward Current Derating Curve**



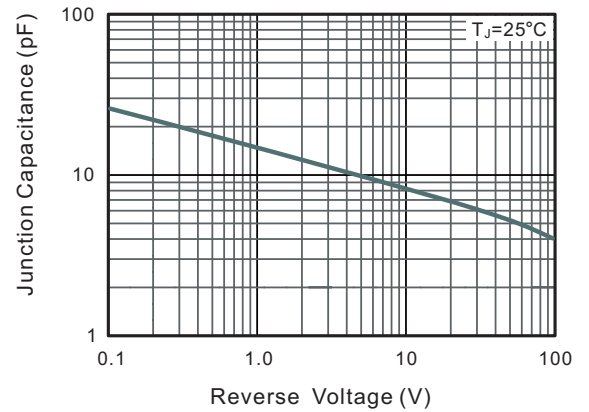
**Fig.2 Typical Reverse Characteristics**



**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**

