



Features

- Small Power Mold Type
- Low I_R
- High Reliability



SOD-123FL



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
SKL110	SOD-123FL	L1H	3000

Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Limit	Unit
DC reverse voltage	V_R	100	V
Mean rectifying current	I_O	1	A
Peak Forward Surge Current @t=8.3 ms	I_{FSM}	50	A
Thermal Resistance, Junction to Ambient (Note 2)	$R_{\theta JA}$	85	°C/W
Thermal Resistance, Junction to Ambient (Note 3)	$R_{\theta JA}$	330	°C/W
Operating and Storage Temperature Range	T_{stg}, T_J	-65~+175	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. The heat generated must be less than the thermal conductivity from Junction-to-Ambient: $dP_D/dT_J < 1/R_{\theta JA}$.

Electrical Characteristics (Ta=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit	Conditions
Maximum Instantaneous Forward Voltage	V_F	0.76 0.84 0.61 0.68	V	$I_F=1A, T_J=25^{\circ}C$ $I_F=2A, T_J=25^{\circ}C$ $I_F=1A, T_J=125^{\circ}C$ $I_F=2A, T_J=125^{\circ}C$
Maximum Instantaneous Reverse Current (Note 4)	I_R	40	μA	Rated dc Voltage, $T_J=25^{\circ}C$
		0.5	mA	Rated dc Voltage, $T_J=125^{\circ}C$

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

2. Mounted with 700 mm² copper pad size (Approximately 1 in²) 1 oz FR4 Board.
3. Mounted with pad size approximately 20 mm² copper, 1 oz FR4 Board.
4. Pulse Test: Pulse Width $\leq 380 \mu s$, Duty Cycle $\leq 2.0\%$.



Typical Characteristics

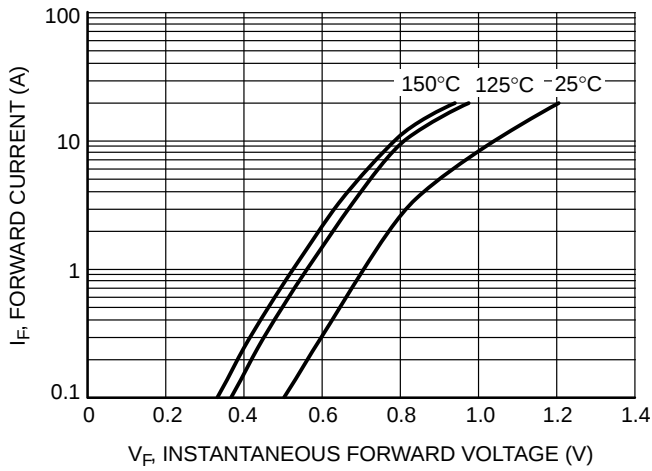


Figure 1. Typical Forward Voltage

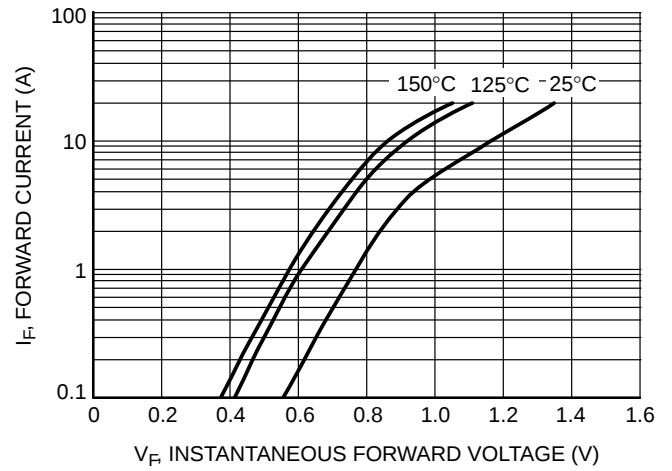


Figure 2. Maximum Forward Voltage

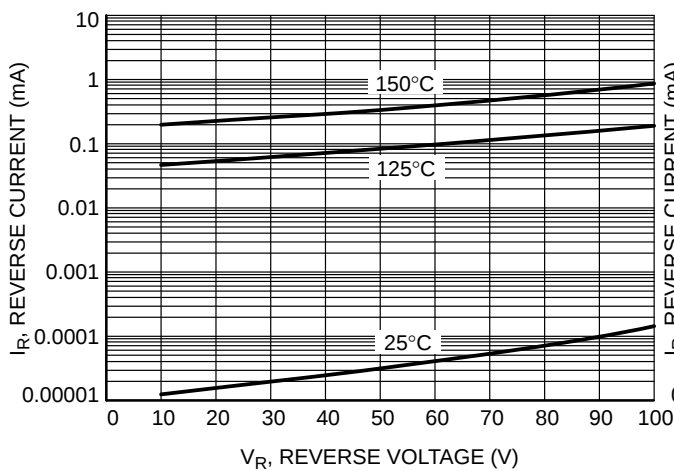


Figure 3. Typical Reverse Current

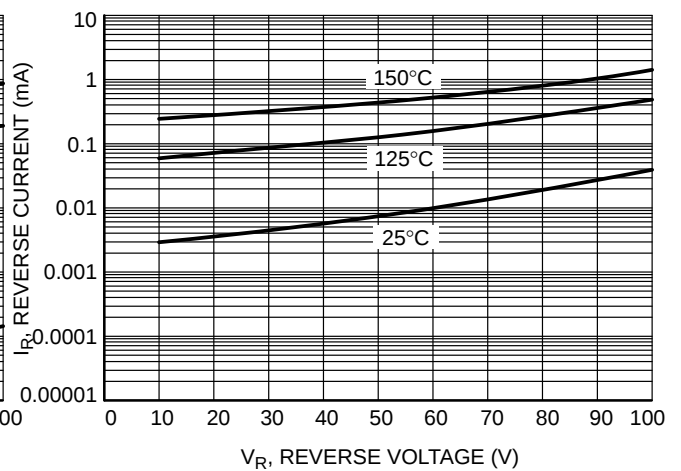


Figure 4. Maximum Reverse Current

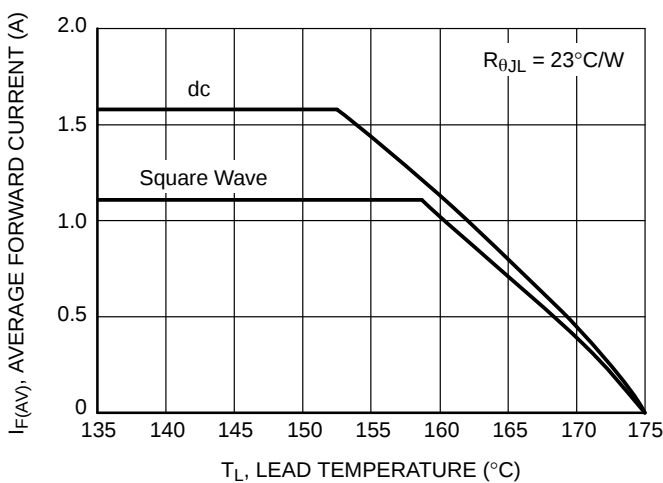


Figure 5. Current Derating

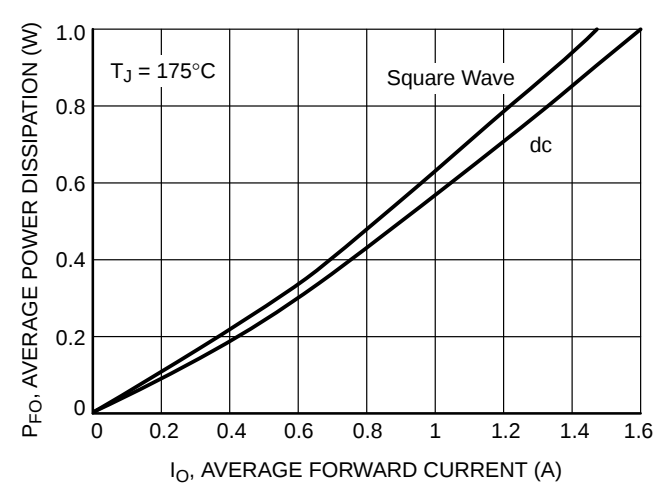
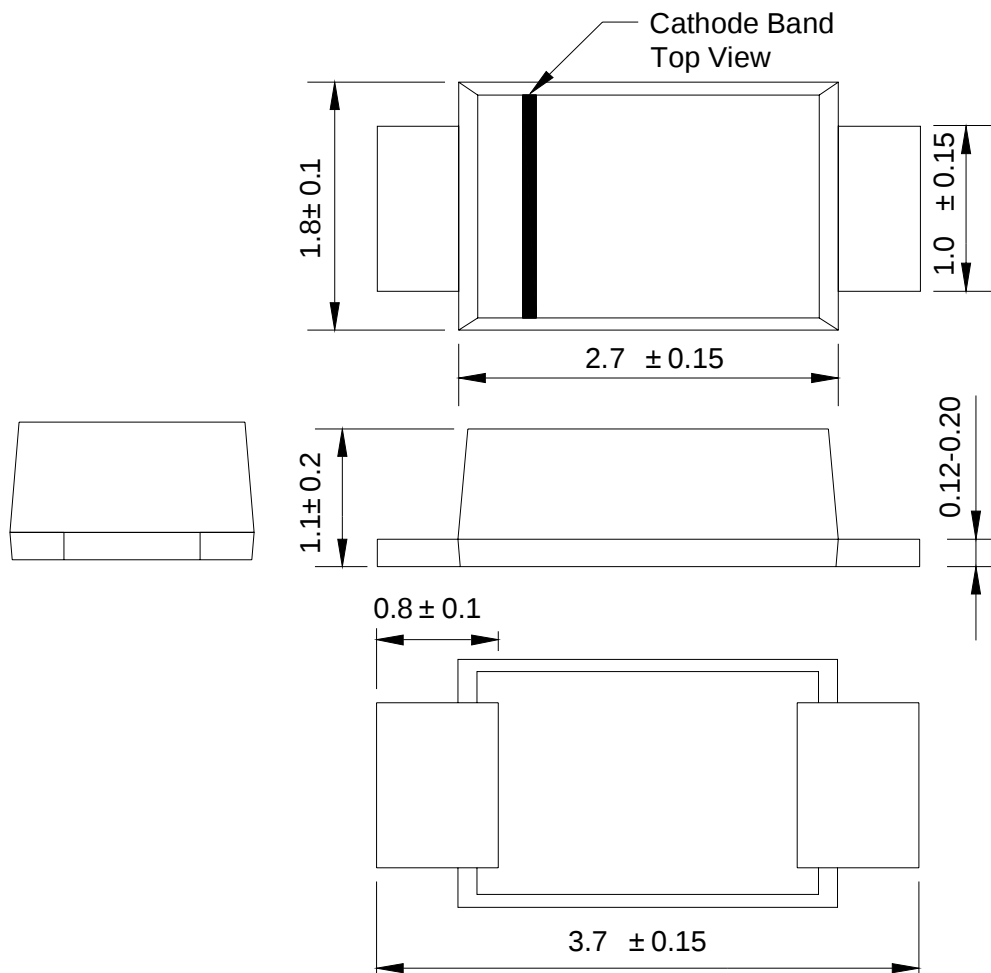


Figure 6. Forward Power Dissipation



Package Outline Dimensions
SOD-123FL





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