

Surface Mount Rectifier Diode

Features

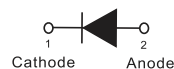
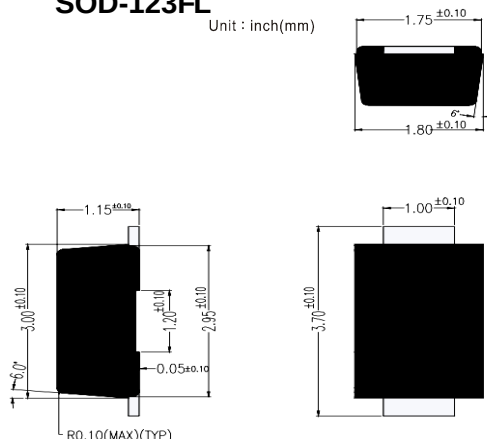
- Glass passivated junction chip
- Ideal for automated placement
- Low forward voltage drop
- High surge current capability
- Comply with RoHS standard, halogen-free

Mechanical Data

- package: SOD-123FL
- Polarity: Indicated by cathode band
- Epoxy: UL 94V-0 rate flame retardant
- Mounting Position : Any

SOD-123FL

Unit : inch(mm)



Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	A1	A2	A3	A4	A5	A6	A7	Unit
Repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Reverse voltage, total rms value	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Forward current	$I_{F(AV)}$	1							A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	I_{FSM}	30							A
Junction temperature	T_J	- 55 to +150							$^\circ\text{C}$
Storage temperature	T_{STG}	- 55 to +150							$^\circ\text{C}$

Thermal Performance

Parameter	Symbol	Typ	Unit
Junction to Lead Thermal Resistance	$R_{\theta JL}$	25	$^\circ\text{C/W}$
Junction to Ambient Thermal Resistance	$R_{\theta JA}$	85	$^\circ\text{C/W}$

Electrical Specifications ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Typ	Max	Unit
Forward voltage ⁽¹⁾	$I_F = 1\text{A}, T_J = 25^\circ\text{C}$	V_F	-	1.1	V
Reverse current @ rated V_R per diode ⁽²⁾	$T_J = 25^\circ\text{C}$	I_R	-	1	μA
	$T_J = 125^\circ\text{C}$		-	50	μA
Junction capacitance	1 MHz, $V_R=4\text{V}$	C_J	7	-	pF

Notes:

1. Pulse test with $PW=0.3\text{ ms}$
2. Pulse test with $PW=30\text{ ms}$



Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

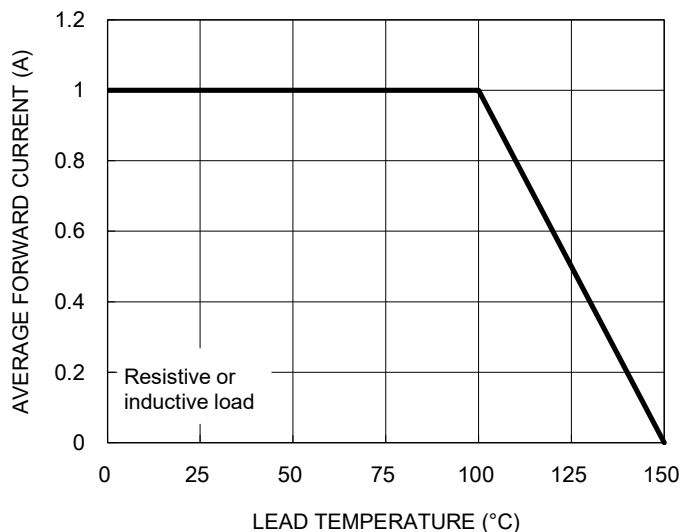


Fig.2 Typical Junction Capacitance

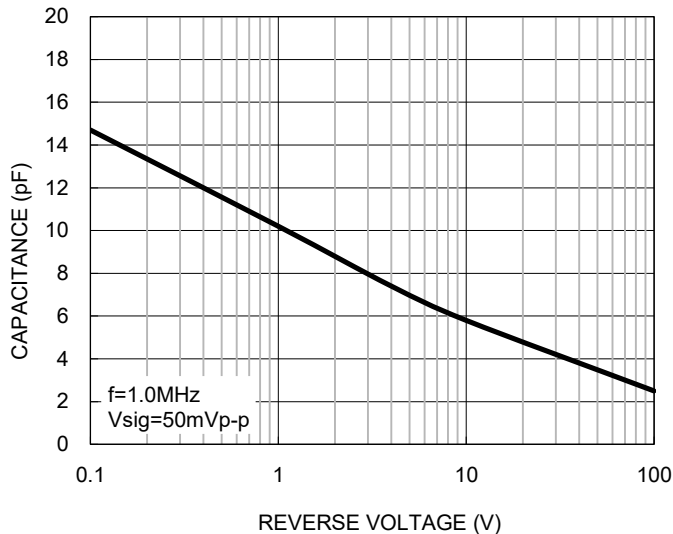


Fig.3 Typical Reverse Characteristics

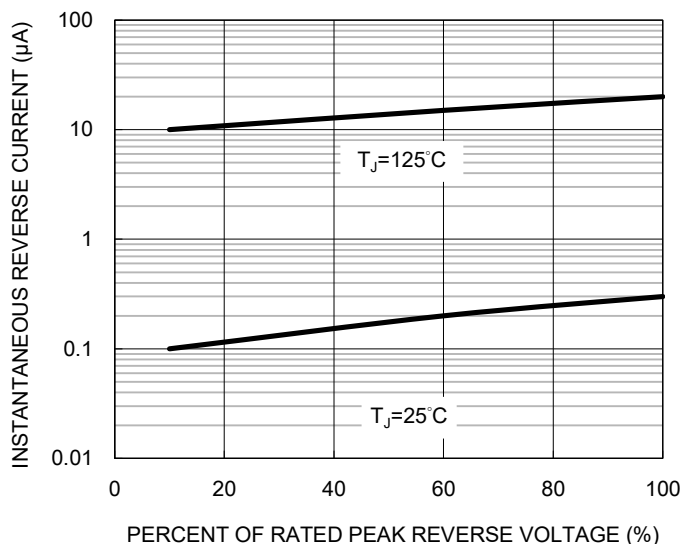


Fig.4 Typical Forward Characteristics

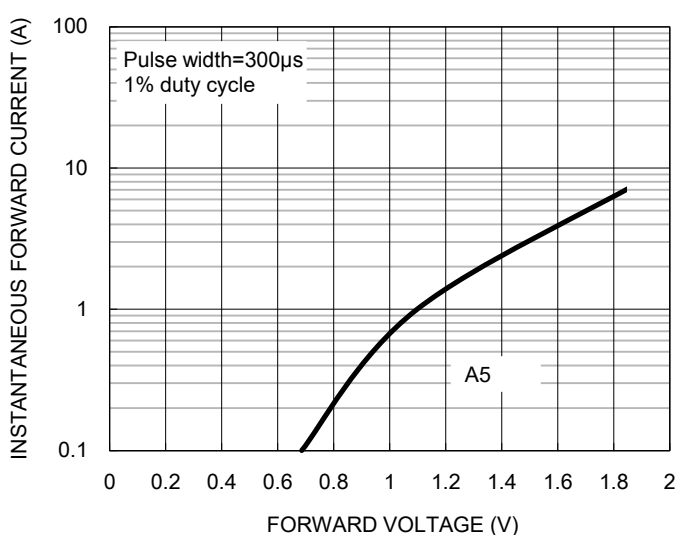


Fig.5 Maximum Non-repetitive Forward Surge Current

