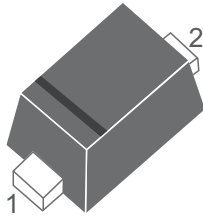


Surface Mount General Purpose Silicon Rectifiers

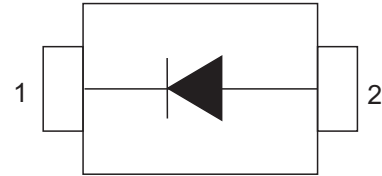
Reverse Voltage - 50 to 1000 V

Forward Current - 1 A

SOD-123FL



Pin Configuration



Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Ideal for automated placement
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

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

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

Parameter	Symbol	S1AW	S1BW	S1DW	S1GW	S1JW	S1KW	S1MW	Unit
Marking Code		A1	A2	A3	A4	A5	A6	A7	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	420	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at $T_C = 125^{\circ}\text{C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	30							A
Maximum instantaneous forward voltage at 1A	V_F	1.1							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 50							μA
Typical junction capacitance ⁽¹⁾	C_J	8(typ.)							pF
Typical thermal resistance ⁽²⁾	$R_{\theta JA}$	90							$^{\circ}\text{C}/\text{W}$
Operating junction temperature range	T_J	-55 to +150							$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150							$^{\circ}\text{C}$

Note : 1. Measured at 1 MHz and applied reverse voltage of 4 V D.C
 2. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas

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

Fig.1 Forward Current Derating Curve

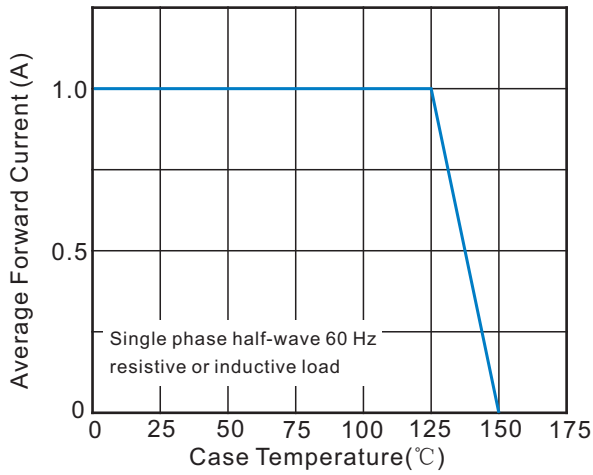


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

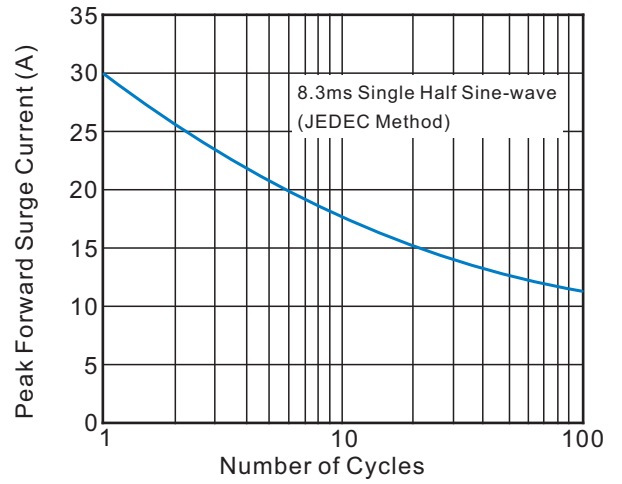


Fig.3 Typical Forward Characteristics

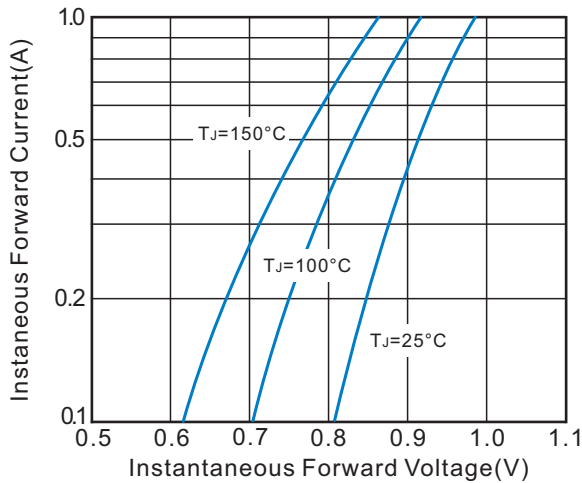


Fig.4 Typical Instantaneous Reverse Characteristics

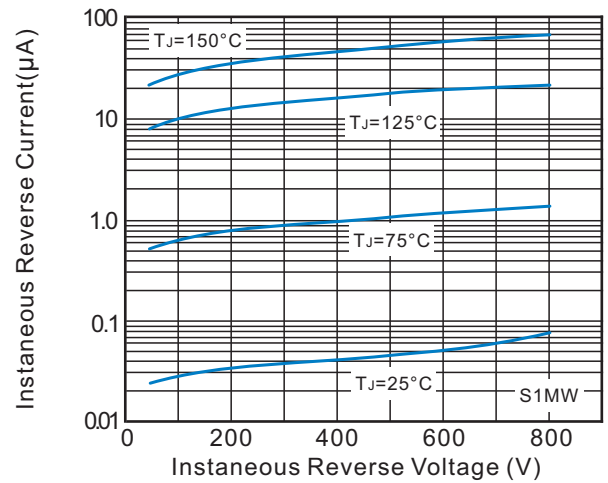
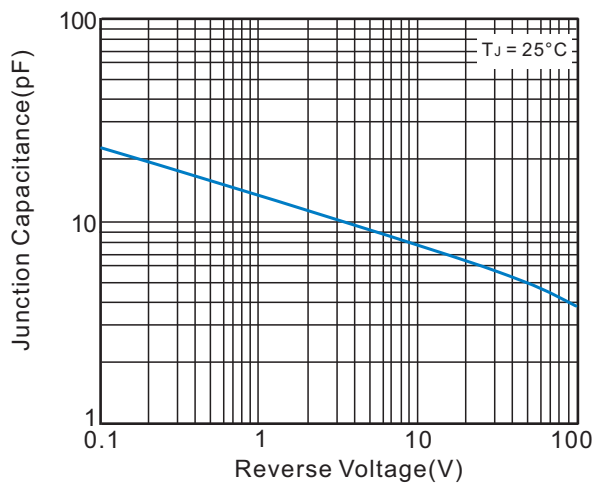
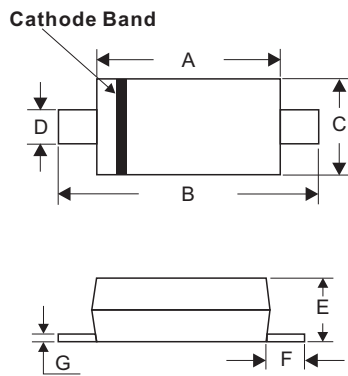


Fig.5 Typical Junction Capacitance

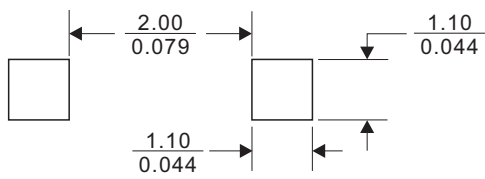


Dimensions(SOD-123FL)



DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	2.50	2.90	0.098	0.114
B	3.50	3.90	0.138	0.154
C	1.38	1.95	0.054	0.077
D	0.50	1.10	0.020	0.043
E	0.80	1.33	0.031	0.053
F	0.25	1.10	0.010	0.043
G	0.05	0.25	0.002	0.010

Recommended Mounting Pad Layout



Dimensions in ($\frac{\text{millimeters}}{\text{inches}}$)