

SOD-123

Features:

- Fast Switching Speed: $t_{rr} = 4\text{ns}$ (Typ.)
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance
- Available in Lead Free Version

Applications:

- Surface mount fast switching diode

Maximum Ratings:

Ratings at 25°C unless otherwise specified.

Characteristic	Symbol	Value	Unit
Non-Repetitive peak reverse voltage	V_{RM}	100	V
Peak repetitive reverse voltage Working peak reverse voltage DC Reverse Voltage	V_{RRM} V_{RWM} V_R	75	V
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward continuous current	I_{FM}	300	mA
Average rectified output current	I_o	150	mA
Non-Repetitive peak forward surge current at $t=1\mu\text{s}$ at $t=1\text{s}$	I_{FSM}	2 1	A
Power dissipation	P_d	350	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	357	°C/W
Operating and storage temperature range	T_j, T_{STG}	-65 to+150	°C

Electrical Characteristics:

Ratings at 25°C unless otherwise specified.

Characteristic	Symbol	Min.	Max.	Unit	Test Condition
Reverse breakdown voltage	$V_{(BR)R}$	75	-	V	$I_R = 1\mu A$
Forward voltage	V_F	-	0.715 0.855 1 1.25	V	$I_F = 1mA$ $I_F = 10mA$ $I_F = 50mA$ $I_F = 150mA$
Reverse current	I_R	-	1 25	μA nA	$V_R = 75V$ $V_R = 20V$
Capacitance between terminals	C_T	-	2	pF	$V_R = 0, f = 1MHz$
Reverse recovery time	t_{rr}	-	4	ns	$I_F = I_R = 10mA,$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$

Typical Characteristics:

$T_A = 25^\circ C$ unless otherwise specified.

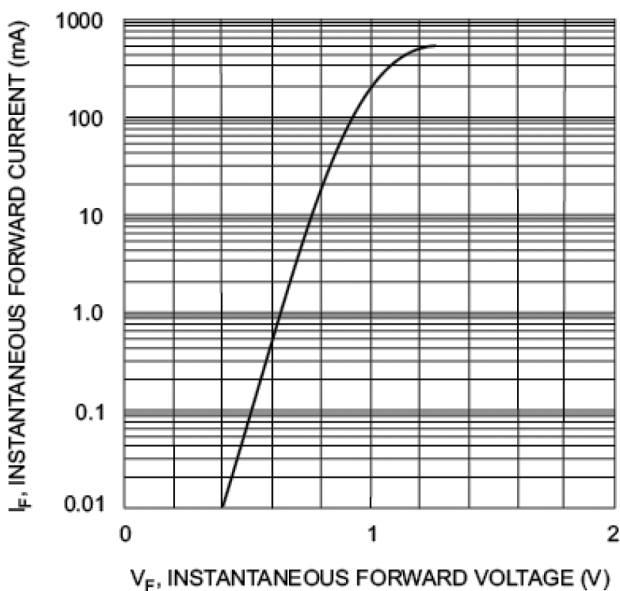


Fig. 1 Forward Characteristics

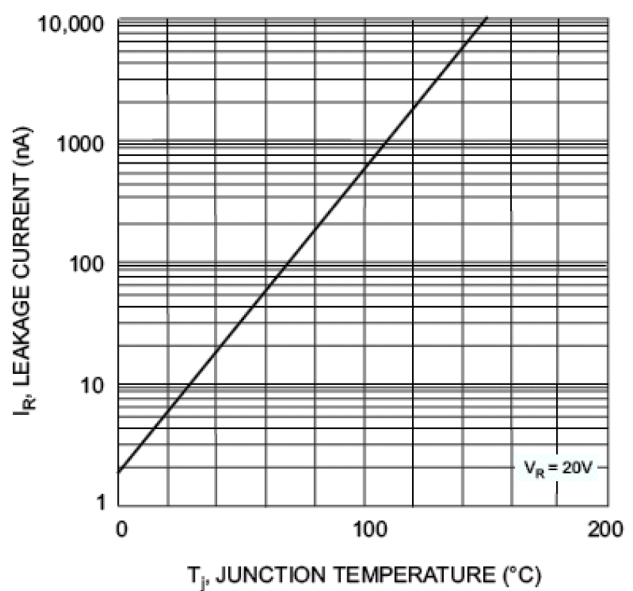
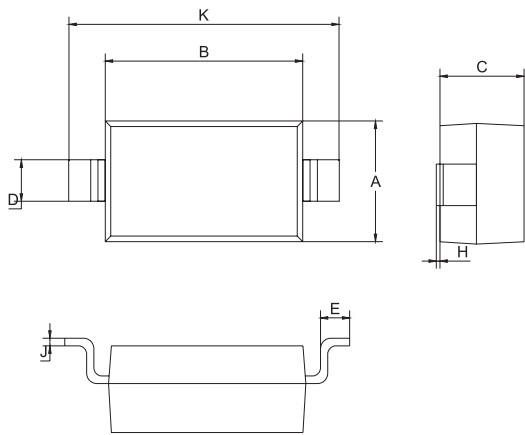


Fig. 2 Leakage Current vs Junction Temperature

Package Outline:

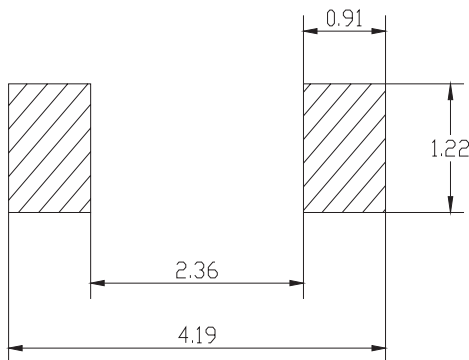
Plastic surface mounted package



SOD-123		
Dim.	Min.	Max.
A	1.4	1.8
B	2.55	2.85
C	1.15 Typ.	
D	0.5	0.6
E	0.3	0.4
H	0.02	0.1
J	0.1 Typ.	
K	3.55	3.85

Dimensions : Millimetres

Soldering Footprint:



Package Information:

Device	Package	Shipping
1N4148W-13-F	SOD-123	3,000 / Tape & Reel

Part Number Table

Description	Part Number
Silicon Epitaxial Planar Diode	1N4148W-13-F

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