

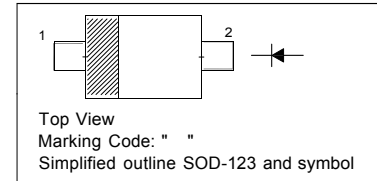
## Silicon Epitaxial Planar Switching Diode

### Features

- SOD-123 package
- Fast switching
- These diodes are also available in other case style including the DO-35 case with the type designation 1N4148, the MiniMELF case with the type designation LL4148 and the MicroMELF case with the type designation MCL4148.

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	$V_{RM}$	100	V
Reverse Voltage	$V_R$	75	V
Average Rectified Forward Current	$I_{F(AV)}$	150	mA
Non-repetitive Peak Forward Surge Current at $t = 1\text{ }\mu\text{s}$	$I_{FSM}$	2	A
Power Dissipation	$P_{tot}$	400	mW
Thermal Resistance from Junction to Ambient Air	$R_{\theta JA}$	312	$^\circ\text{C/W}$
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 1\text{ }\mu\text{A}$	$V_{(BR)R}$	75	-	V
Forward Voltage at $I_F = 1\text{ mA}$ at $I_F = 10\text{ mA}$ at $I_F = 50\text{ mA}$ at $I_F = 150\text{ mA}$	$V_F$	- - - -	0.715 0.855 1 1.25	V
Peak Reverse Current at $V_R = 75\text{ V}$ at $V_R = 20\text{ V}$ at $V_R = 75\text{ V}, T_J = 150\text{ }^\circ\text{C}$ at $V_R = 25\text{ V}, T_J = 150\text{ }^\circ\text{C}$	$I_R$	- - - -	1 25 50 30	$\mu\text{A}$ nA $\mu\text{A}$ $\mu\text{A}$
Total Capacitance at $V_R = 0\text{ V}, f = 1\text{ MHz}$	$C_T$	-	2	pF
Reverse Recovery Time at $I_{rr} = 0.1 \times I_R, I_F = I_R = 10\text{ mA}, R_L = 100\text{ }\Omega$	$t_{rr}$	-	4	ns



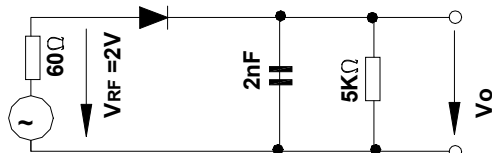
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# SOD-123



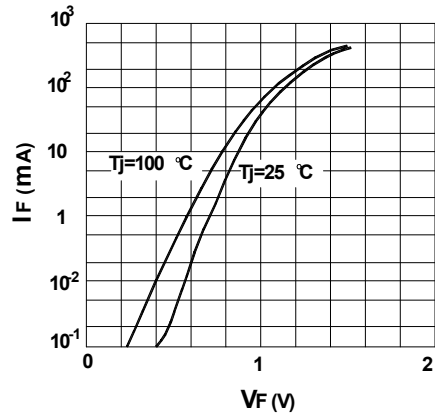
# 1N4148W

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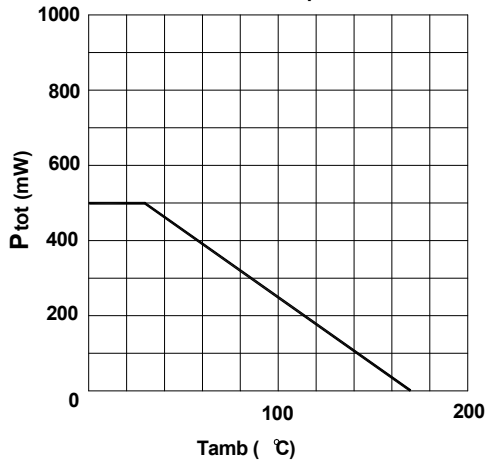


Rectification Efficiency Measurement Circuit

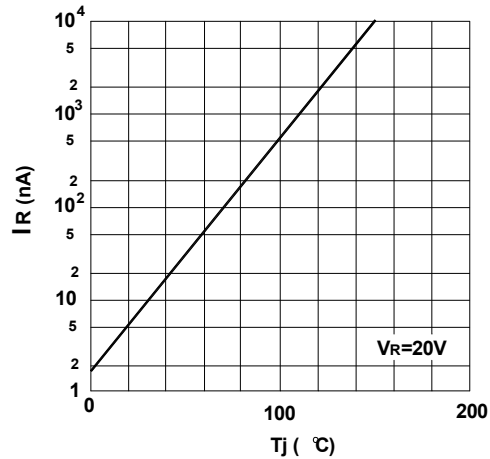
Forward characteristics



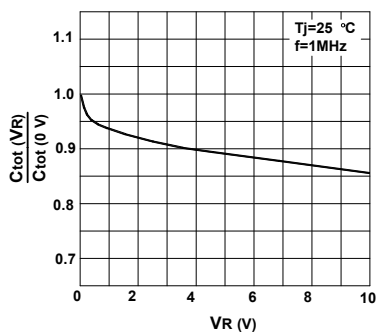
Ammissible power dissipation vs. ambient temperature



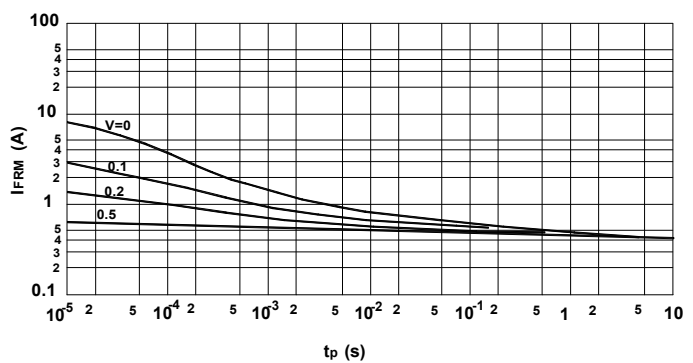
Leakage current vs. junction temperature



Reverse capacitance vs. reverse voltage



Ammissible repetitive peak forward current vs. pulse duration

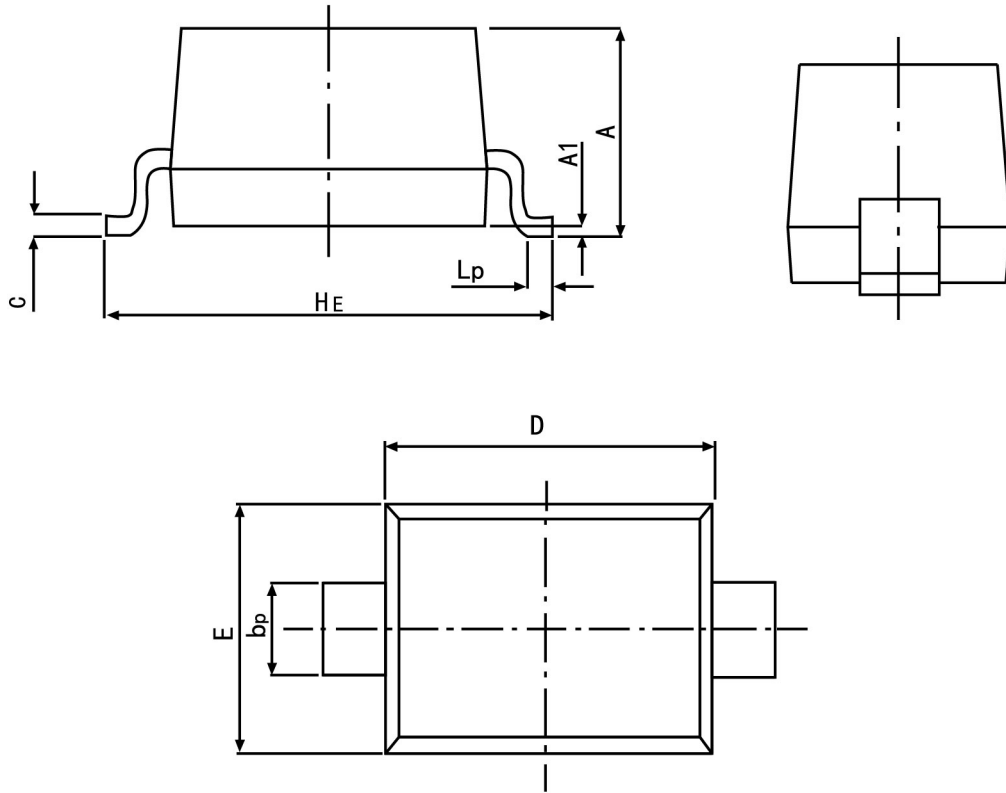




## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.20
bp	0.50	0.60
C	0.100	0.135
D	2.55	2.75
E	1.55	1.65
HE	3.55	3.85
A1	0.01	0.10
Lp	0.20	0.50