

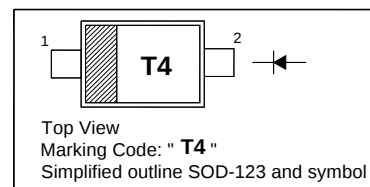
Silicon Epitaxial Planar Switching Diode

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

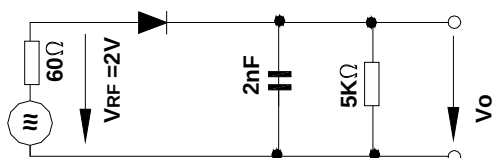


Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

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	I_{FSM}	0.5 1 4	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	$^\circ\text{C}$

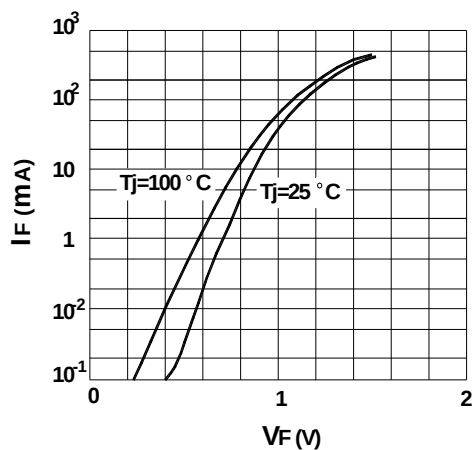
Characteristics at $T_a = 25^\circ\text{C}$

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

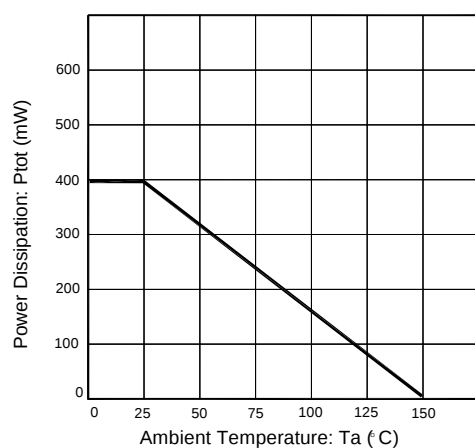


Rectification Efficiency Measurement Circuit

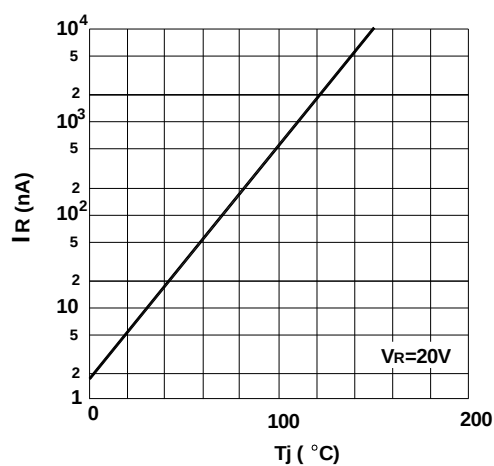
Forward characteristics



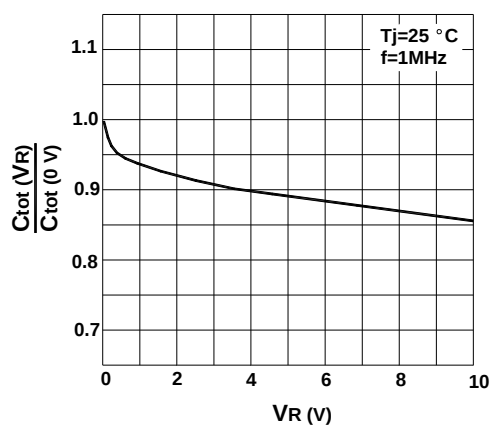
Power Dissipation vs Ambient Temperature



Leakage current vs. junction temperature



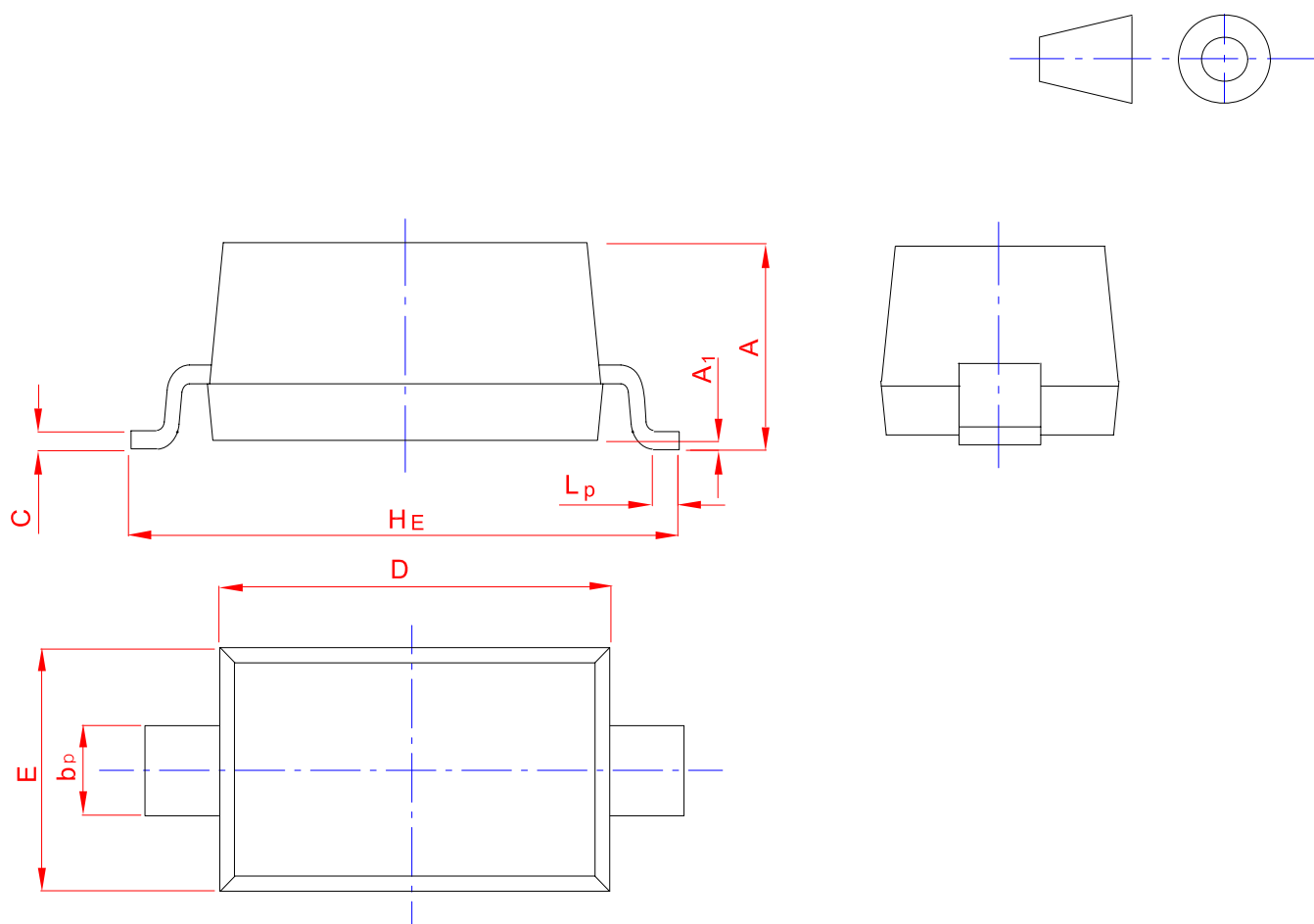
Reverse capacitance vs. reverse voltage



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



UNIT	A	bp	C	D	E	HE	A1	Lp
mm	1.20 0.90	0.60 0.50	0.135 0.100	2.75 2.55	1.65 1.55	3.85 3.55	0.10 0.01	0.50 0.20