

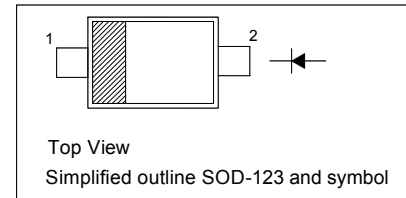
Silicon Epitaxial Planar Small Signal Diode

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



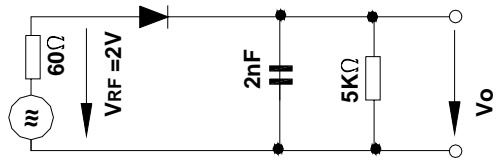
Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	100	V
Reverse Voltage	V_R	75	V
Average Rectified Current Half Wave Rectification with Resistive Load $f \geq 50\text{ Hz}$	$I_{F(AV)}$	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	$R_{\theta JA}$	450	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

Electrical Characteristics ($T_a = 25\text{ }^\circ\text{C}$)

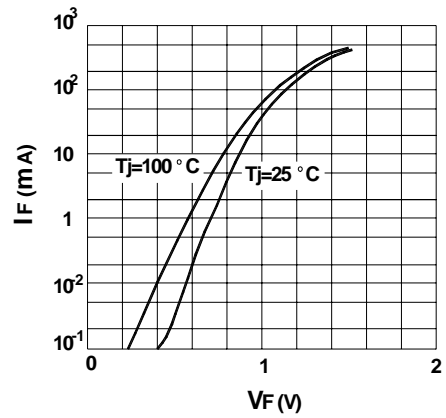
Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 10\text{ mA}$	V_F	-	1	V
Reverse Current at $V_R = 20\text{ V}$	I_R	-	25	nA
at $V_R = 75\text{ V}$		-	5	μA
at $V_R = 20\text{ V}, T_J = 150\text{ }^\circ\text{C}$		-	50	μA
Capacitance at $V_F = V_R = 0\text{ V}$	C_{tot}	-	4	pF
Reverse Recovery Time from $I_F = 10\text{ mA}$ to $I_R = 1\text{ mA}, V_R = 6\text{ V}, R_L = 100\text{ }\Omega$	t_{rr}	-	4	ns
Voltage Rise when Switching On (tested with 50 mA Pulses $t_p = 0.1\text{ }\mu\text{s}$, Rise Time < 30 ns, $f_p = 5\text{ to }100\text{ KHz}$)	V_{fr}	-	2.5	V
Rectification Efficiency at $f = 100\text{ MHz}, V_{RF} = 2\text{ V}$	η_v	0.45	-	-

1N4148W

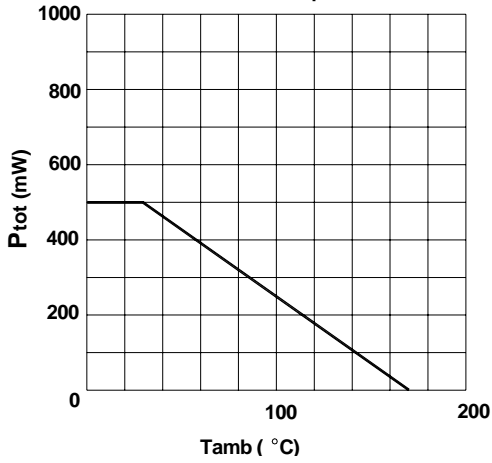


Rectification Efficiency Measurement Circuit

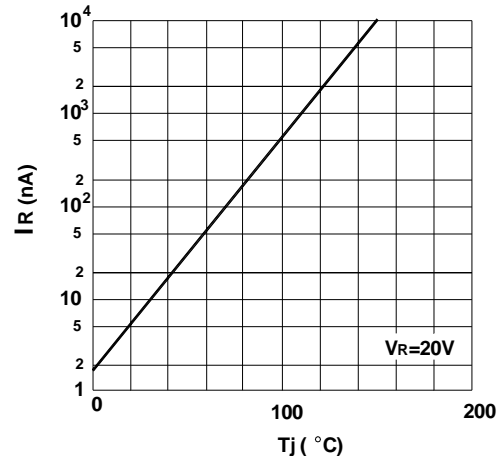
Forward characteristics



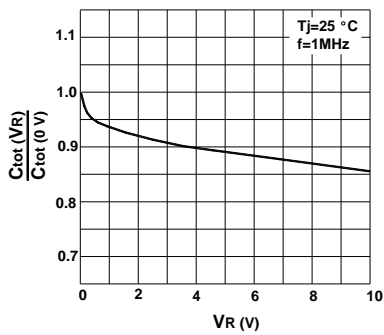
Ammissible power dissipation vs. ambient temperature



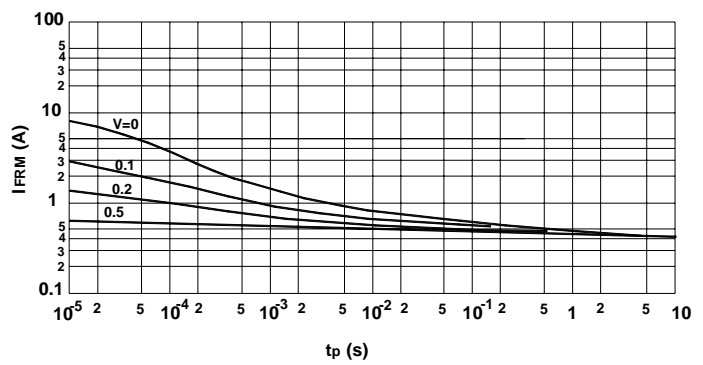
Leakage current vs. junction temperature



Reverse capacitance vs. reverse voltage



Ammissible repetitive peak forward current vs. pulse duration

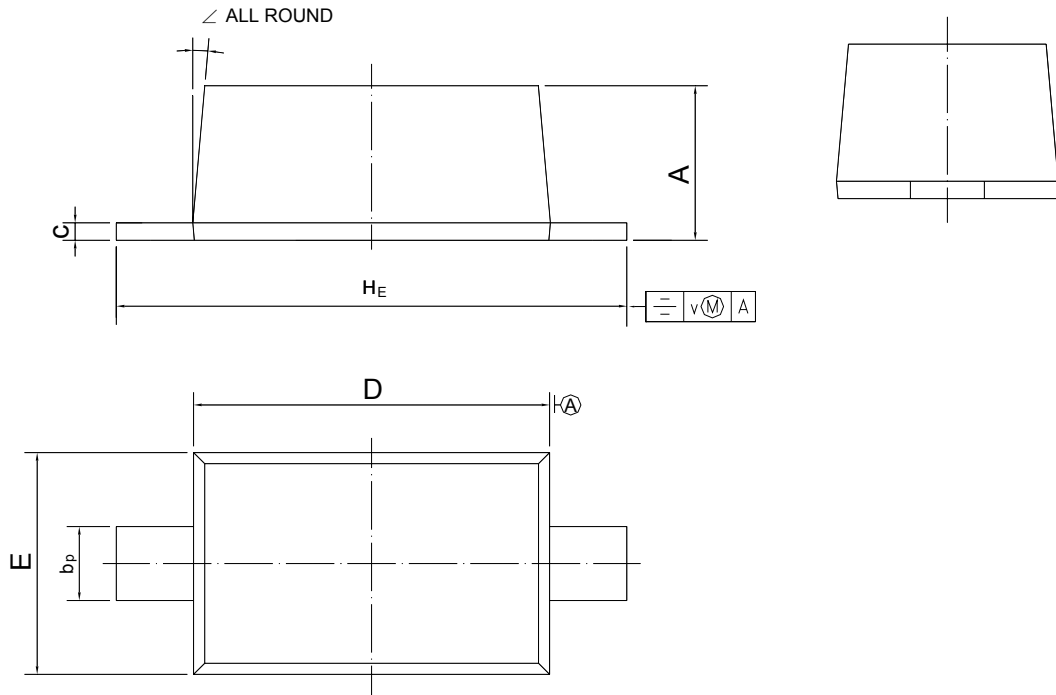


1N4148W

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



UNIT	A	b _p	c	D	E	H _E	v	∠
mm	1.15 1.05	0.6 0.5	0.135 0.127	2.7 2.6	1.65 1.55	3.9 3.7	0.2	5°