

1N4148W

Silicon Epitaxial Planar Switching Diode

FEATURES

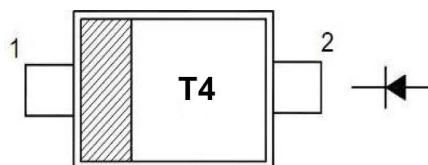
SOD-123 package

Fast switching

These diodes are also available in other case style including the DO-35 case with the type designation 1N4148, the Mini MELF case with the type designation LL4148 and the Micro MELF case with the type designation MCL4148.

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View

Marking Code: "T4"

Simplified outline SOD-123 and symbol

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

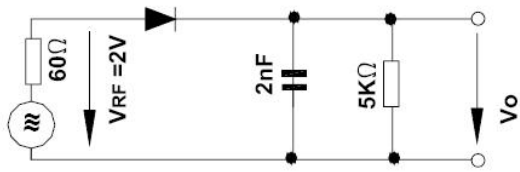
Absolute Maximum Ratings (Ta = 25°C)

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 $t = 1 \mu s$	I_{FSM}	2	A
Power Dissipation	P_{tot}	400	mW
Thermal Resistance from Junction to Ambient Air	$R_{\theta JA}$	312	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 65 to + 150	°C

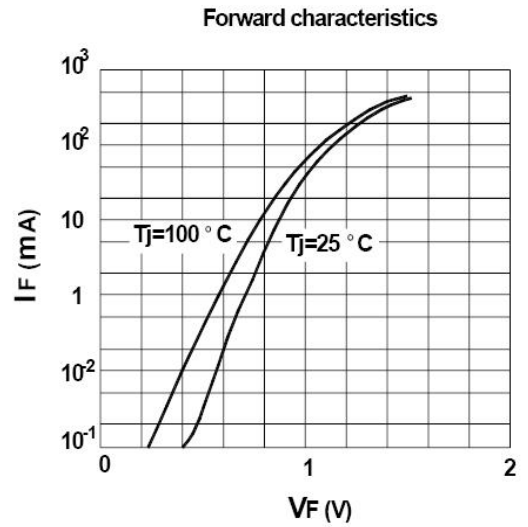
Electrical Characteristics (Ta = 25°C)

PARAMETER	SYMBOL	MAX.	UNIT
Forward Voltage at $I_F = 10 \text{ mA}$	V_F	1	V
Reverse Current	I_R	25	nA
at $V_R = 20 \text{ V}$		5	μA
at $V_R = 75 \text{ V}$		50	μA
at $V_R = 20 \text{ V}, T_J = 150^\circ C$			
Total Capacitance at $V_R = 0 \text{ V}, f = 1 \text{ MHz}$	C_{tot}	4	pF
Reverse Recovery Time at $I_F = 10 \text{ mA}$ to $I_R = 1 \text{ mA}, V_R = 6 \text{ V}, R_L = 100 \Omega$	t_{rr}	4	ns

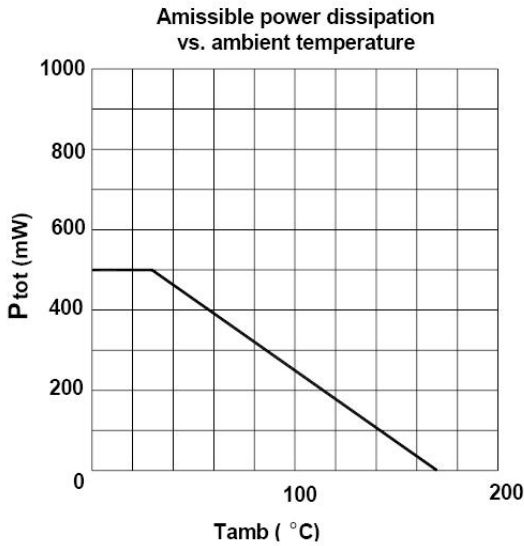
RATINGS AND CHARACTERISTIC CURVES 1N4148W



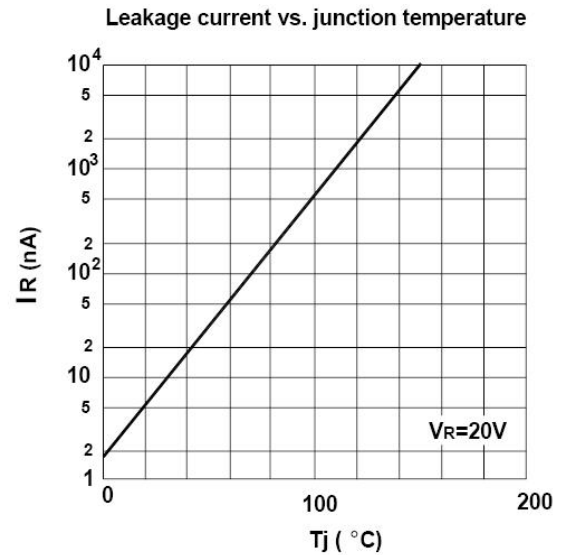
Rectification Efficiency Measurement Circuit



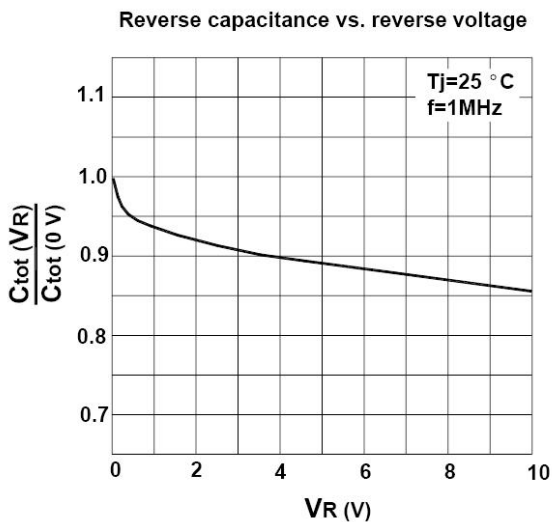
Forward characteristics



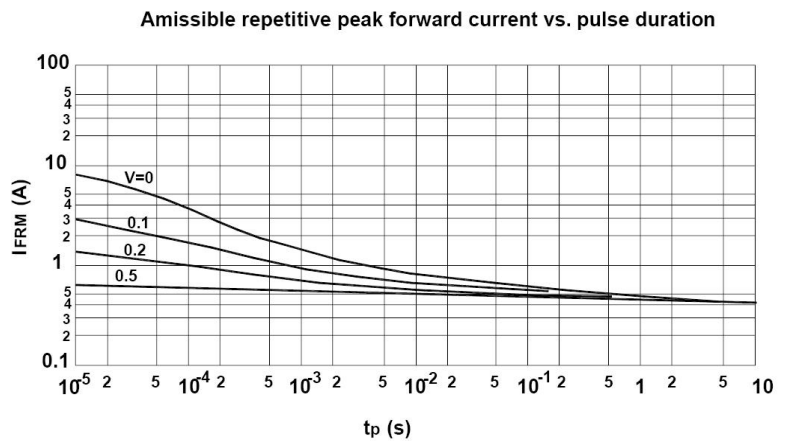
Ammissible power dissipation vs. ambient temperature



Leakage current vs. junction temperature



Reverse capacitance vs. reverse voltage



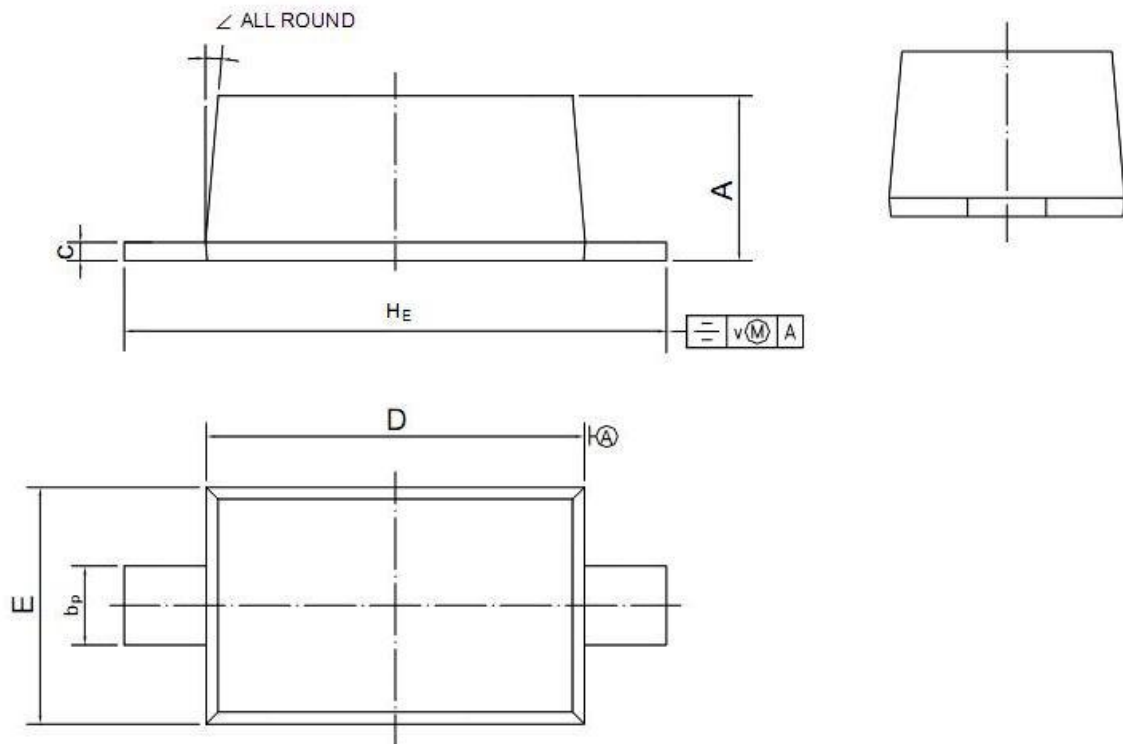
Ammissible repetitive peak forward current vs. pulse duration

RATINGS AND CHARACTERISTIC CURVES 1N4148W

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



UNIT	A	b_p	c	D	E	H_E	v	\angle
mm	1.15 1.05	0.6 0.5	0.135 0.100	2.7 2.6	1.65 1.55	3.85 3.55	0.2	5°