

1N4148W

Silicon Epitaxial Planar Switching Diode

Features

- 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.

Mechanical Data

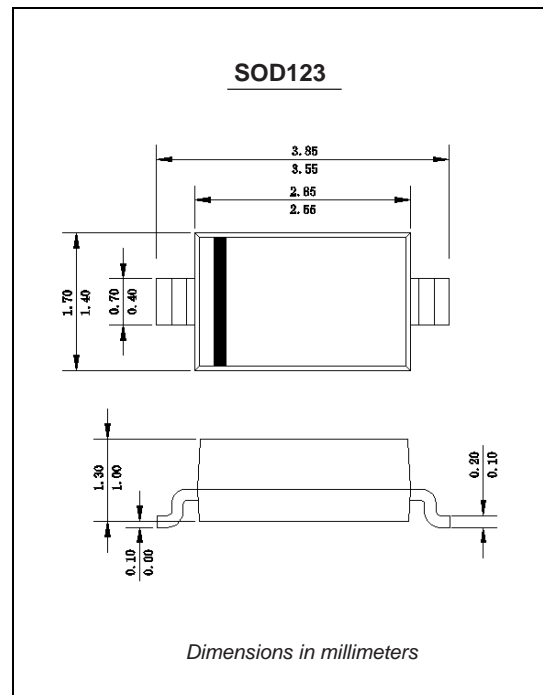
Case: JEDEC SOD-123FL molded plastic body

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Polarity symbol marking on body

Mounting Position: Any

Weight : 0.0007 ounce, 0.02grams



Maximum Ratings And Electrical Characteristics

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

Marking Parameter	T4		
	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 $t = 1 \mu\text{s}$	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	$^\circ\text{C}$

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

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 10 \text{ mA}$	V_F	1	V
Reverse Current at $V_R = 20 \text{ V}$ at $V_R = 75 \text{ V}$ at $V_R = 20 \text{ V}, T_j = 150^\circ\text{C}$	I_R	25 5 50	nA μA μA
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

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Fig.1 Rectification Efficiency Measurement Circuit

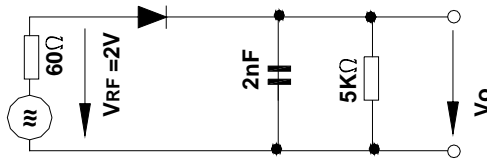


Fig.2 Forward characteristics

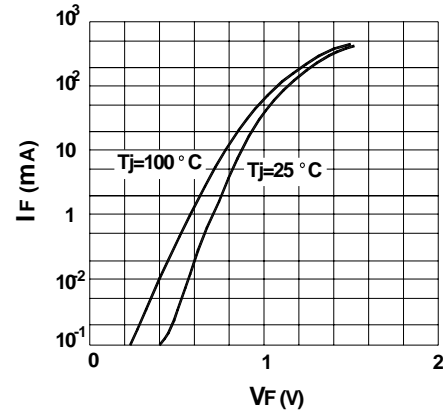


Fig.3 Ammissible power dissipation vs. ambient temperature

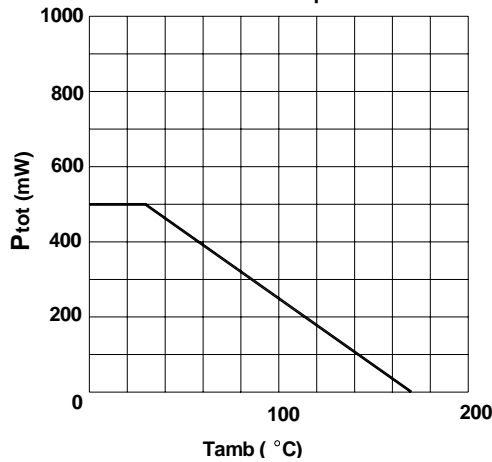


Fig.4 Leakage current vs. junction temperature

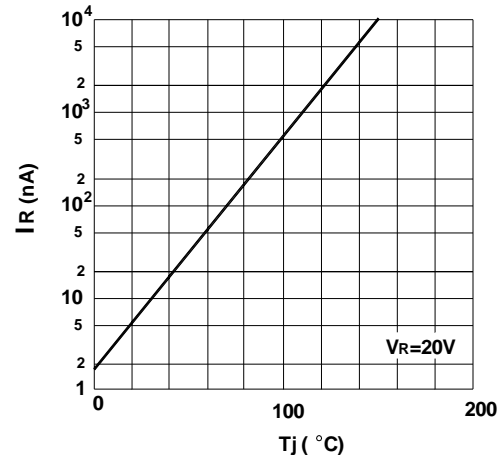


Fig.5 Reverse capacitance vs. reverse voltage

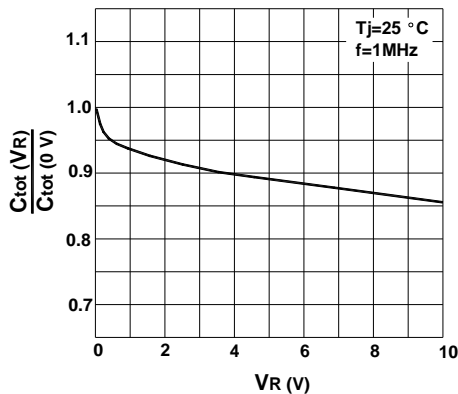


Fig.6 Ammissible repetitive peak forward current vs. pulse duration

