

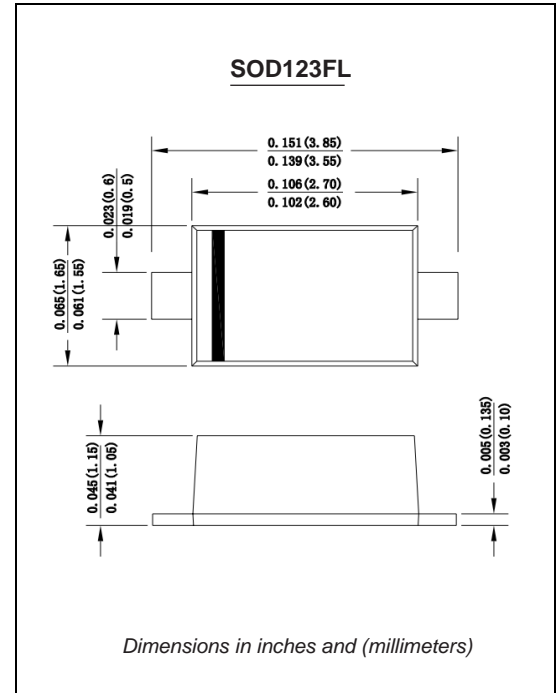
## 1N4148W Silicon Epitaxial Planar Switching Diode

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

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 $t = 1 \mu\text{s}$	$I_{FSM}$	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 $\mu\text{A}$ $\mu\text{A}$
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

Fig.1 Rectification Efficiency Measurement Circuit

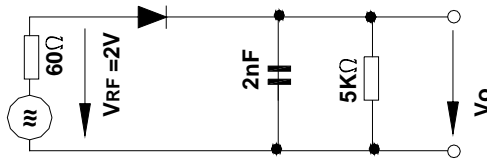


Fig.2 Forward characteristics

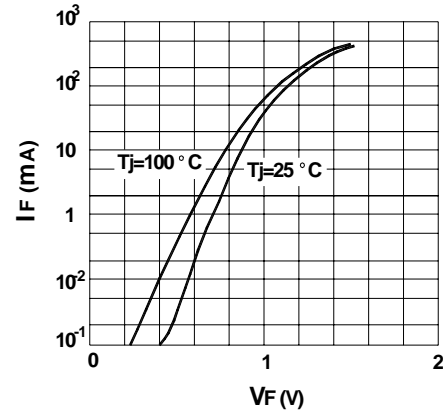


Fig.3 Ammissible power dissipation vs. ambient temperature

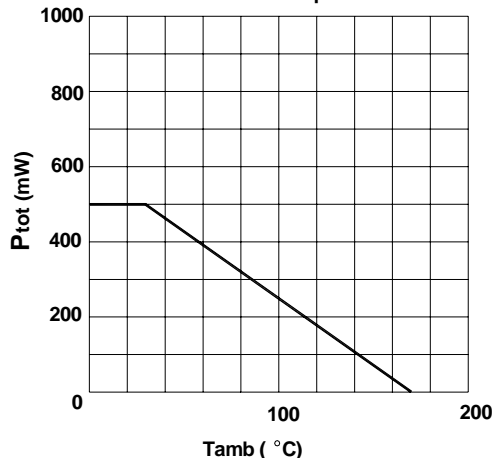


Fig.4 Leakage current vs. junction temperature

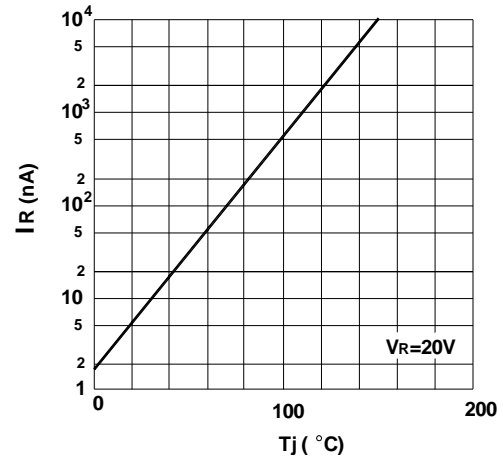


Fig.5 Reverse capacitance vs. reverse voltage

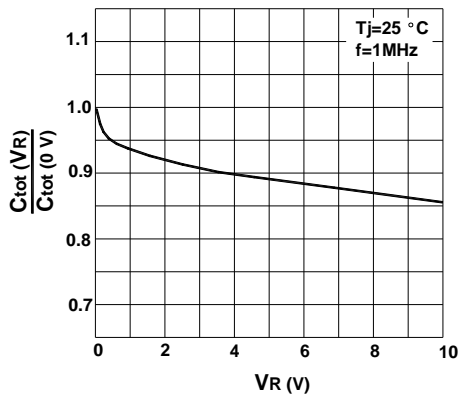


Fig.6 Ammissible repetitive peak forward current vs. pulse duration

