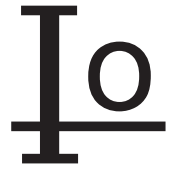


1N4148W

Silicon Epitaxial Planar Switching Diode

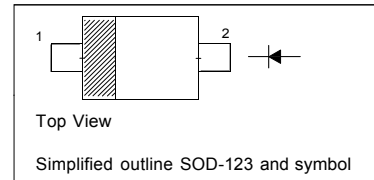


Features

- 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 MiniMELF case with the type designation LL4148 and the MicroMELF case with the type designation MCL4148.
- * Lead Free Finish/RoHS Compliant

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |

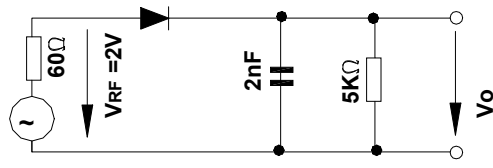


Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

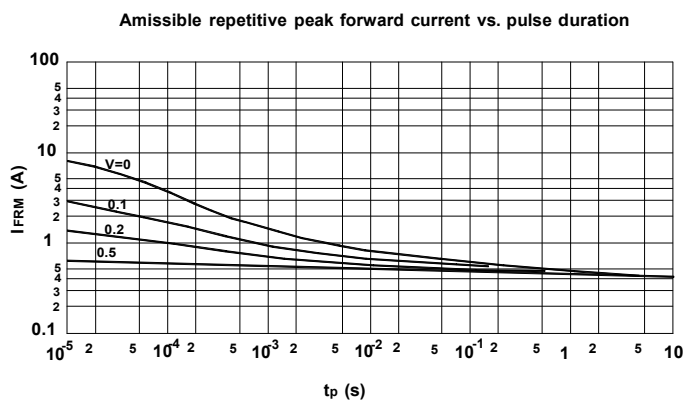
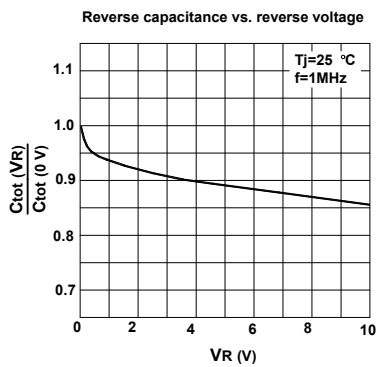
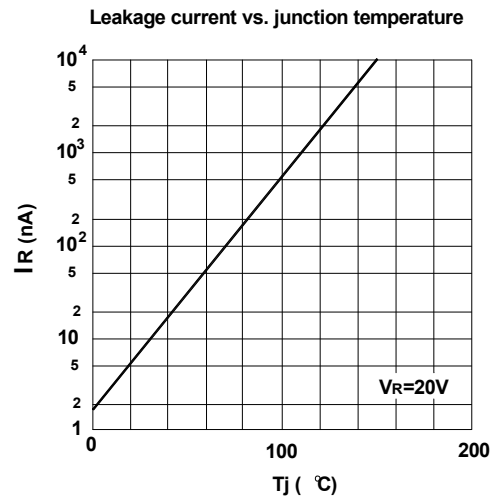
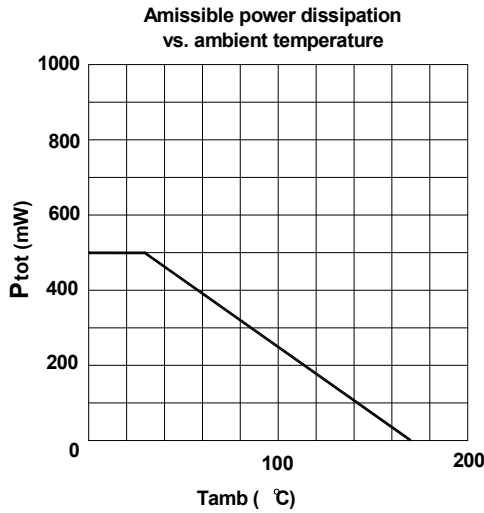
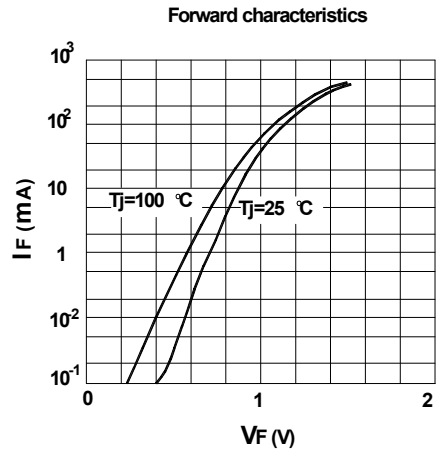
| Parameter | Symbol | Value | Unit |
|--|-----------------|---------------|--------------------|
| Peak Reverse Voltage | V_{RM} | 100 | V |
| Reverse Voltage | V_R | 75 | V |
| Average Rectified Forward Current | $I_{F(AV)}$ | 150 | mA |
| Non-repetitive Peak Forward Surge Current at $t = 1 \mu\text{s}$ | 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 | $^\circ\text{C}$ |

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

| Parameter | Symbol | Min. | Max. | Unit |
|--|-------------|------------------|-----------------------------|---|
| Reverse Breakdown Voltage at $I_R = 1 \mu\text{A}$ | $V_{(BR)R}$ | 75 | - | V |
| Forward Voltage at $I_F = 1 \text{ mA}$ at $I_F = 10 \text{ mA}$ at $I_F = 50 \text{ mA}$ at $I_F = 150 \text{ mA}$ | V_F | - - - - | 0.715 0.855 1 1.25 | V |
| Peak Reverse Current at $V_R = 75 \text{ V}$ at $V_R = 20 \text{ V}$ at $V_R = 75 \text{ V}, T_J = 150^\circ\text{C}$ at $V_R = 25 \text{ V}, T_J = 150^\circ\text{C}$ | I_R | - - - - | 1 25 50 30 | μA nA μA μA |
| Total Capacitance at $V_R = 0 \text{ V}, f = 1 \text{ MHz}$ | C_T | - | 2 | pF |
| Reverse Recovery Time at $I_{rr} = 0.1 \times I_R, I_F = I_R = 10 \text{ mA}, R_L = 100 \Omega$ | t_{rr} | - | 4 | ns |



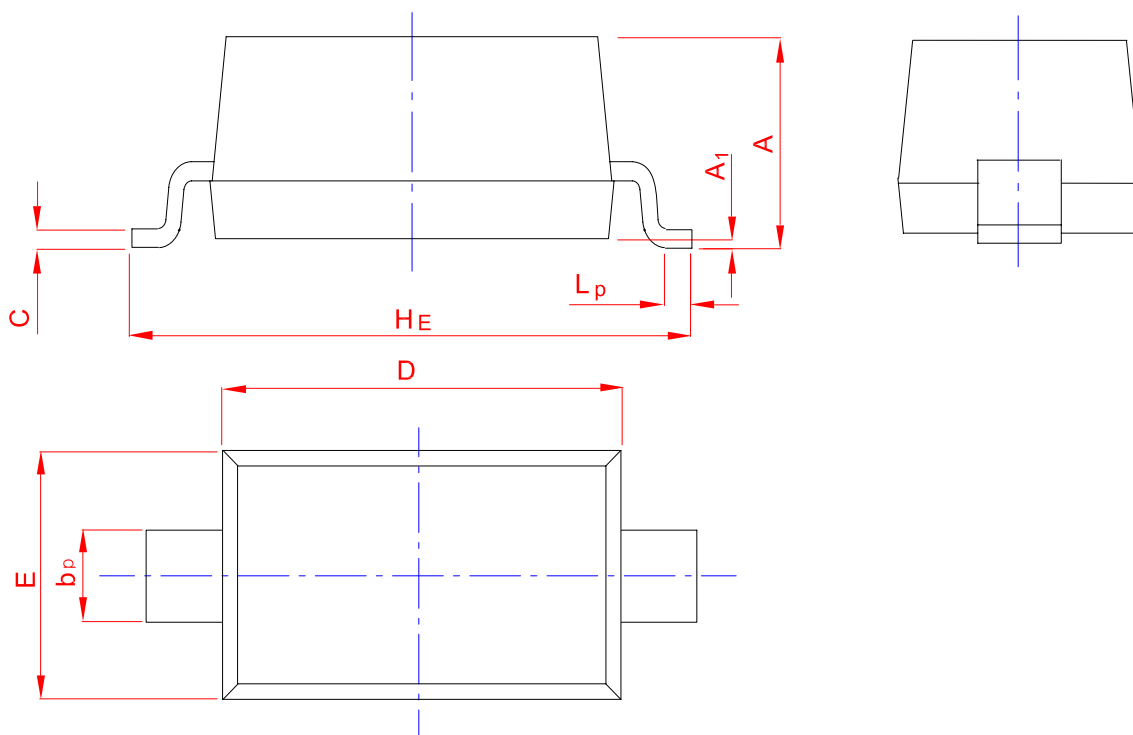
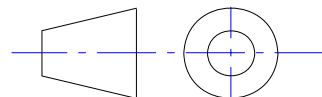
Rectification Efficiency Measurement Circuit



PACKAGE OUTLINE

SOD-123

Plastic surface mounted package; 2 leads



| UNIT | A | b _p | C | D | E | H _E | A ₁ | L _p |
|------|------|----------------|-------|------|------|----------------|----------------|----------------|
| mm | 1.20 | 0.60 | 0.135 | 2.75 | 1.65 | 3.85 | 0.10 | 0.50 |
| | 0.90 | 0.50 | 0.100 | 2.55 | 1.55 | 3.55 | 0.01 | 0.20 |