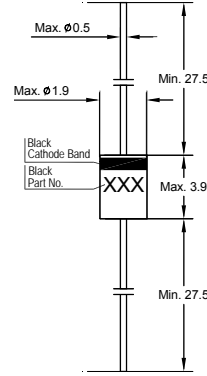


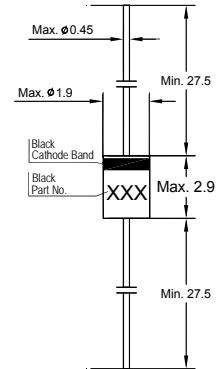
SILICON EPITAXIAL PLANAR DIODE

Fast Switching Diode

This diode is also available in MiniMELF case with the type designation LL4148



Glass Case DO-35
Dimensions in mm



Glass Case DO-34
Dimensions in mm

Absolute Maximum Ratings (T_a = 25 °C)

| Parameter | Symbol | Value | Unit |
|---|------------------|-------------------|------|
| Peak Reverse Voltage | V _{RM} | 100 | V |
| Reverse Voltage | V _R | 75 | V |
| Rectified Current (Average), Half Wave Rectification with Resist. Load at f ≥ 50 Hz | I _O | 150 ¹⁾ | mA |
| Surge Forward Current at t < 1 s and T _j = 25 °C | I _{FSM} | 500 | mA |
| Power Dissipation | P _{tot} | 500 ¹⁾ | mW |
| Junction Temperature | T _j | 200 | °C |
| Storage Temperature Range | T _S | - 65 to + 200 | °C |

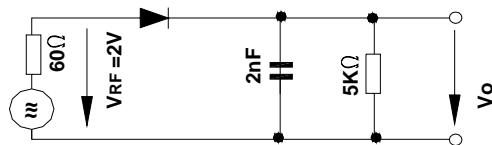
¹⁾ Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

1N4148

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

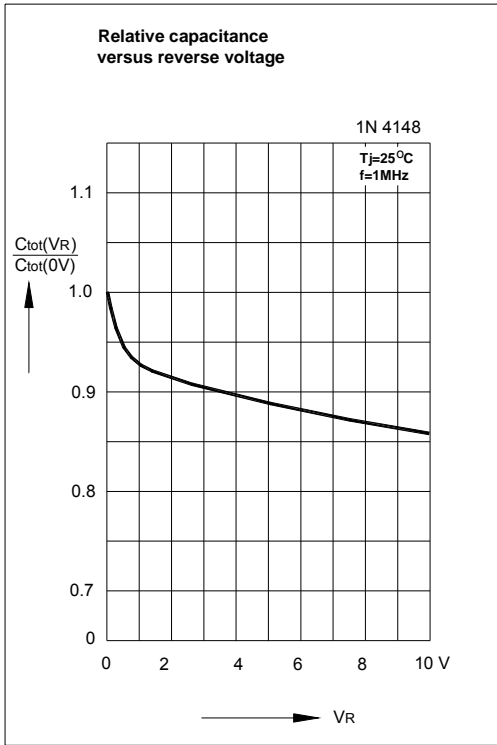
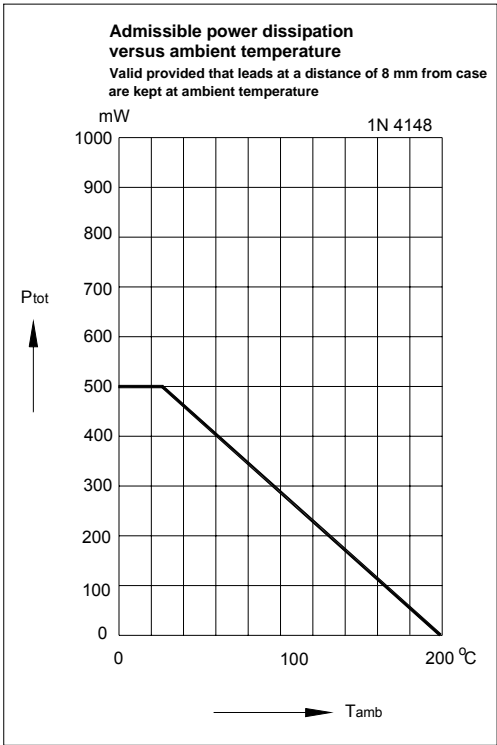
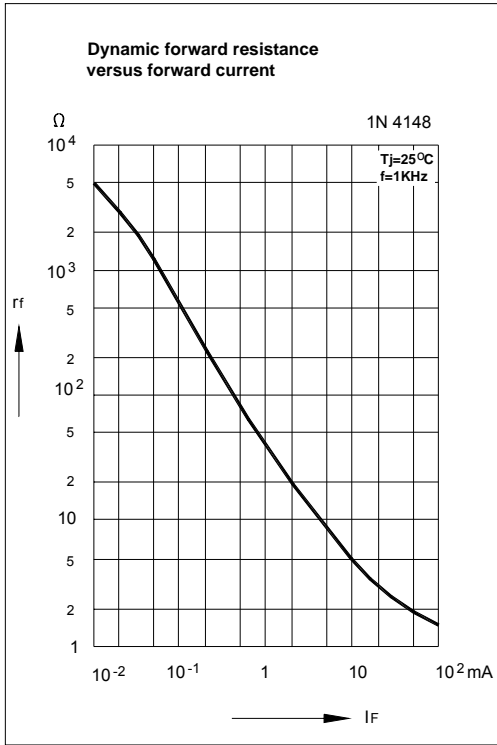
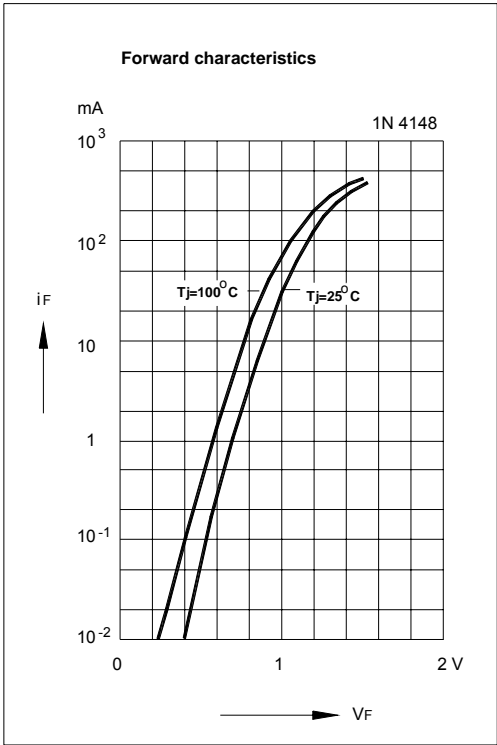
| Parameter | Symbol | Min. | Max. | Unit |
|--|----------------------------|-------------|--------------------|--------------------------------------|
| Forward Voltage at $I_F = 10\text{ mA}$ | V_F | - | 1 | V |
| Leakage Current at $V_R = 20\text{ V}$ at $V_R = 75\text{ V}$ at $V_R = 20\text{ V}, T_j = 150\text{ }^\circ\text{C}$ | I_R I_R I_R | - - - | 25 5 50 | nA μA μA |
| Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$ at $I_R = 5\text{ }\mu\text{A}$ | $V_{(BR)R}$ $V_{(BR)R}$ | 100 75 | - - | V V |
| Capacitance at $V_F = V_R = 0$ | C_{tot} | - | 4 | pF |
| Voltage Rise when Switching ON tested with 50 mA Forward Pulses $t_p = 0.1\text{ s}$, Rise Time < 30 ns, $f_p = 5\text{ to }100\text{ KHz}$ | V_{fr} | - | 2.5 | V |
| 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 |
| Thermal Resistance Junction to Ambient Air | R_{thA} | - | 0.35 ¹⁾ | K/mW |
| Rectification Efficiency at $f = 100\text{ MHz}$, $V_{RF} = 2\text{ V}$ | η_V | 0.45 | - | - |

¹⁾ Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.



Rectification Efficiency Measurement Circuit

1N4148



1N4148

