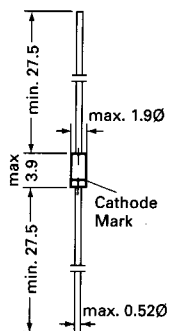


1N 4148 SILICON EPITAXIAL PLANAR DIODE

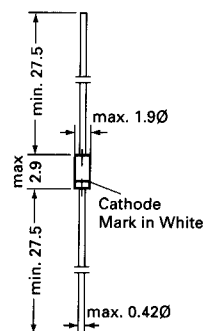
Silicon Epitaxial Planar Diode

fast switching diode.

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



Glass case JEDEC DO-35

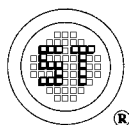


Glass case JEDEC DO-34

Dimensions in mm

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

| | Symbol | Value | Unit |
|---|-----------|-------------------|------------------|
| Reverse Voltage | V_R | 75 | V |
| Peak Reverse Voltage | V_{RM} | 100 | V |
| Rectified Current (Average) Half Wave Rectification with Resist. Load at $T_{amb} = 25\text{ }^\circ\text{C}$ and $f \geq 50\text{ Hz}$ | I_o | 150 ¹⁾ | mA |
| Surge Forward Current at $t < 1\text{ s}$ and $T_j = 25\text{ }^\circ\text{C}$ | I_{FSM} | 500 | mA |
| Power Dissipation at $T_{amb} = 25\text{ }^\circ\text{C}$ | P_{tot} | 500 ¹⁾ | mW |
| Junction Temperature | T_j | 200 | $^\circ\text{C}$ |
| Storage Temperature Range | T_s | -65 to + 200 | $^\circ\text{C}$ |
| ¹⁾ Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature | | | |



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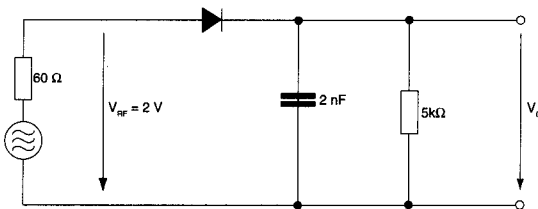


1N 4148 SILICON EPITAXIAL PLANAR DIODE

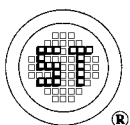
Characteristics at $T_j = 25\text{ }^\circ\text{C}$

| | Symbol | Min. | Typ. | 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_{R1} I_{R2} I_{R3} | - - - | - - - | 25 5 50 | nA μA μA |
| Reverse Breakdown Voltage tested with $100\text{ }\mu\text{A}$ Pulses | $V_{(BR)R}$ | 100 | - | - | 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 $< 30\text{ ns}$, $f_p = 5\text{ to }100\text{ kHz}$ | 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



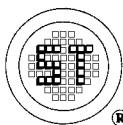
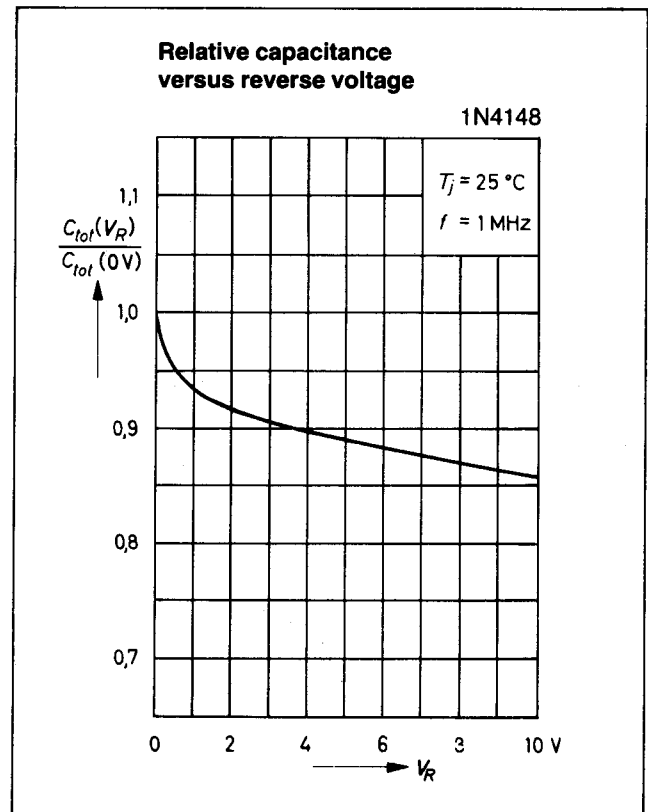
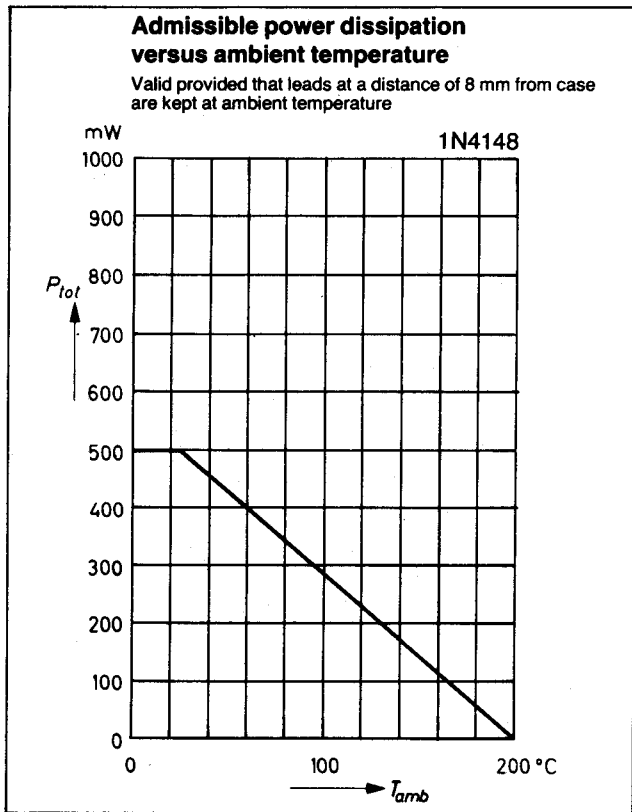
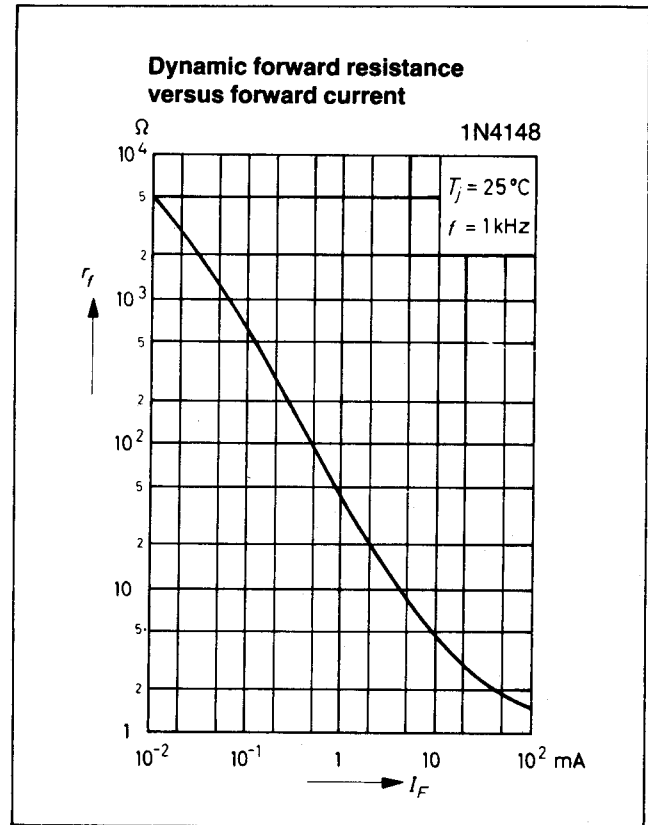
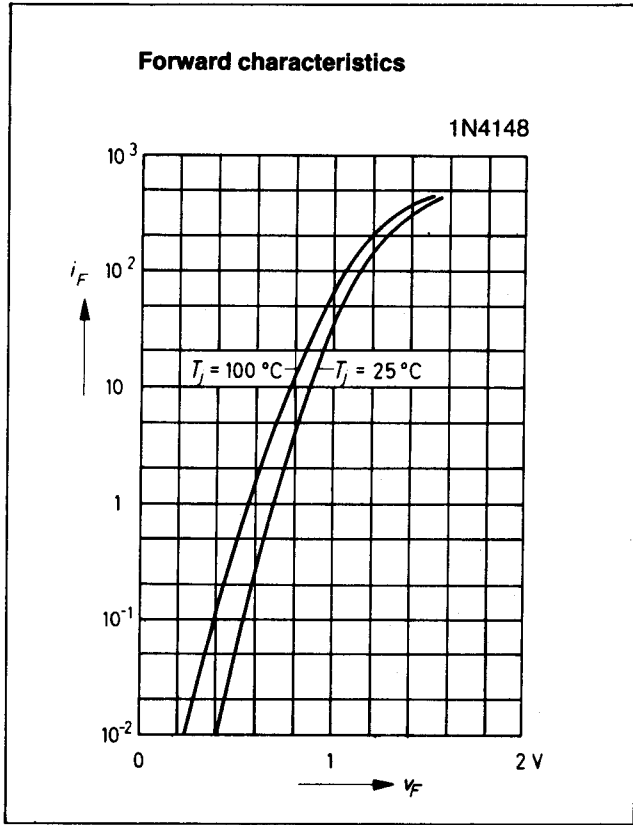
Rectification Efficiency Measurement Circuit



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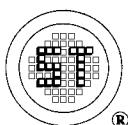
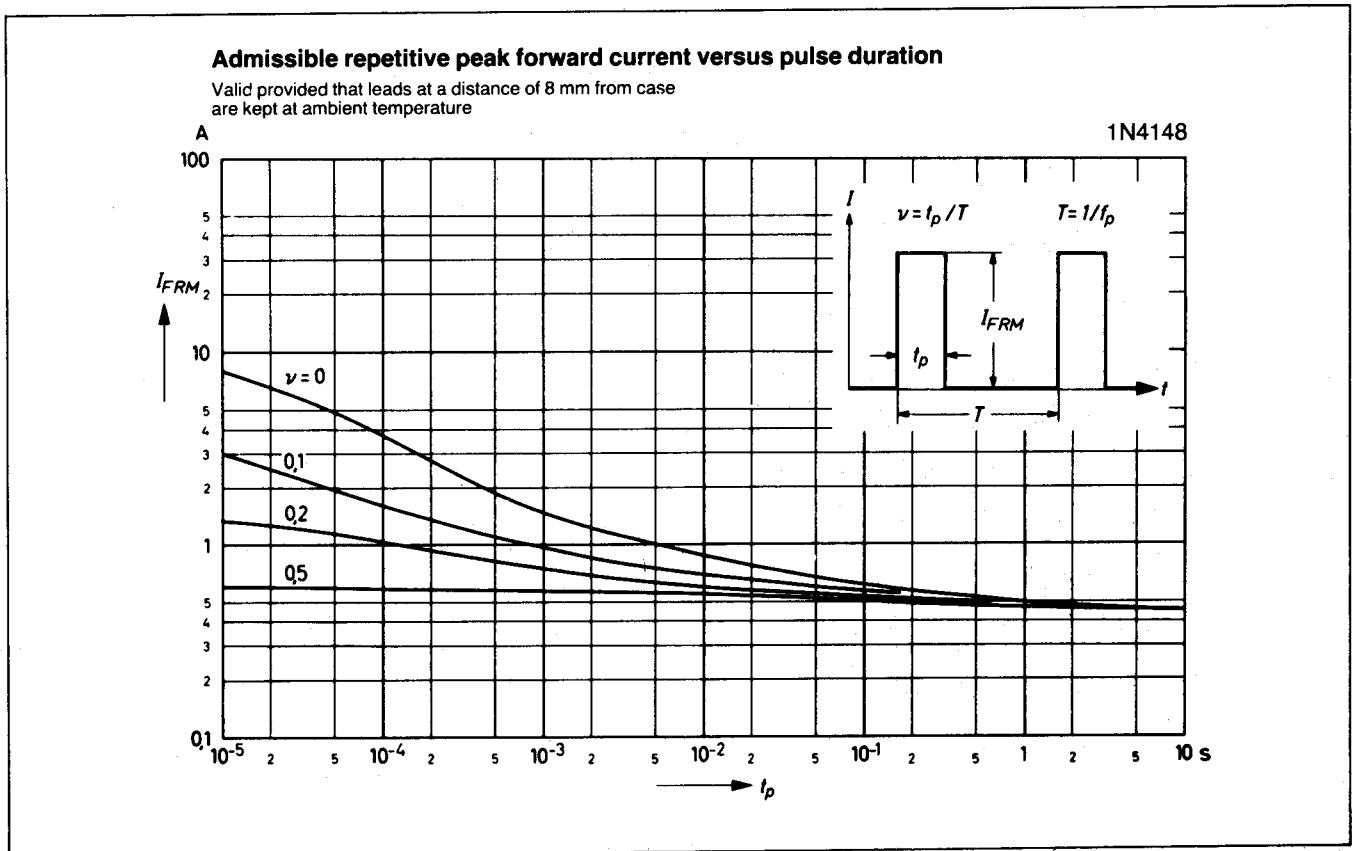
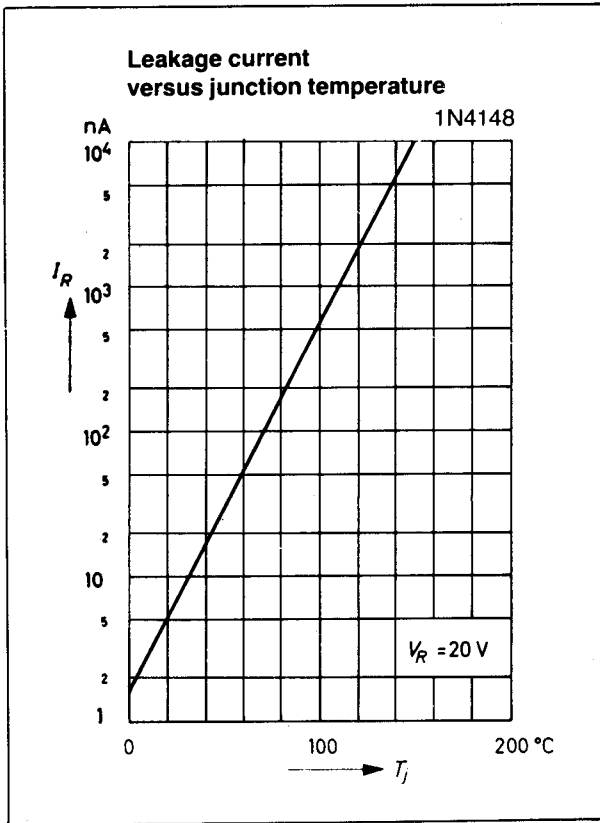
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