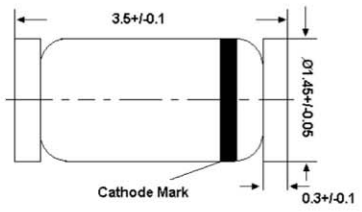
Fast switching diode in MiniMELF case especially suited

**Silicon Epitaxial Planar Switching Diode**

for automatic surface mounting




**Glass case MiniMELF**
**Dimensions in mm**

**LL-34**

**Absolute Maximum Ratings ($T_a$ = 25 °C)**

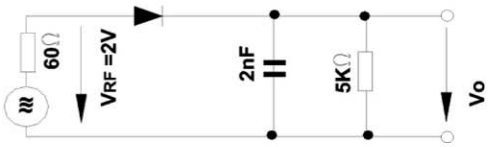
| Parameter | | Symbol | Value | Unit |
|---|---|---|---|---|
| Peak Reverse Voltage | | $V_{RM}$ | 100 | V |
| Reverse Voltage | | $V_R$ | 75 | V |
| Average Rectified Forward Current | | $I_{F(AV)}$ | 200 | mA |
| Non-repetitive Peak Forward Surge Current | at t = 1 s<br>at t = 1 ms<br>at t = 1 µs | $I_{FSM}$ | 0.5<br>1<br>4 | A |
| Power Dissipation | | $P_{tot}$ | 500 [1)] | mW |
| Junction Temperature | | $T_j$ | 175 | °C |
| Storage Temperature Range | | $T_{stg}$ | - 65 to + 175 | °C |

[1)] Valid provided that electrodes are kept at ambient temperature.

**Characteristics at $T_a$ = 25 °C**

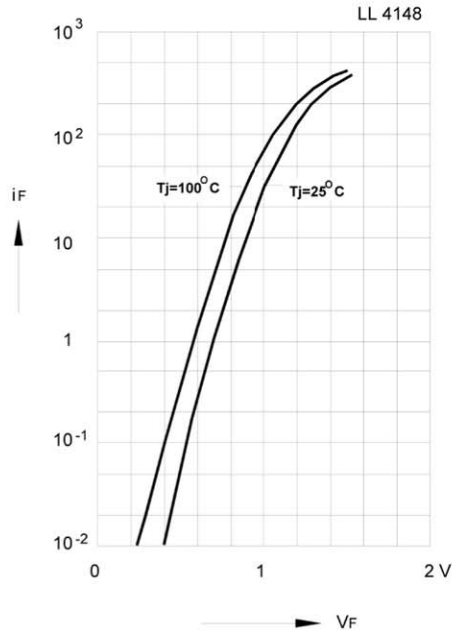
| Parameter | Symbol | Min. | Max. | Unit |
|---|---|---|---|---|
| Forward Voltage<br>at $I_F$ = 10 mA | $V_F$ | - | 1 | V |
| Leakage Current<br>at $V_R$ = 20 V<br>at $V_R$ = 75 V<br>at $V_R$ = 20 V, $T_j$ = 150 °C | <br>$I_R$<br>$I_R$<br>$I_R$ | <br>-<br>-<br>- | <br>25<br>5<br>50 | <br>nA<br>µA<br>µA |
| Reverse Breakdown Voltage<br>tested with 100 µA Pulses | $V_{(BR)R}$ | 100 | - | V |
| Capacitance<br>at $V_R$ = 0, f = 1 MHz | $C_{tot}$ | - | 4 | pF |
| Voltage Rise when Switching ON<br>tested with 50 mA Forward Pulses<br>tp = 0.1 s, Rise Time < 30 ns, fp = 5 to 100 KHz | $V_{fr}$ | - | 2.5 | V |
| Reverse Recovery Time<br>at $I_F$ = 10 mA to $I_R$ = 1 mA, $V_R$ = 6 V, $R_L$ = 100 Ω | $t_{rr}$ | - | 4 | ns |
| Thermal Resistance Junction to Ambient Air | $R_{thA}$ | - | 0.35 [1] | K/mW |
| Rectification Efficiency<br>at f = 100 MHz, $V_{RF}$ = 2 V | $\eta_V$ | 0.45 | - | - |

[1] Valid provided that electrodes are kept at ambient temperature.

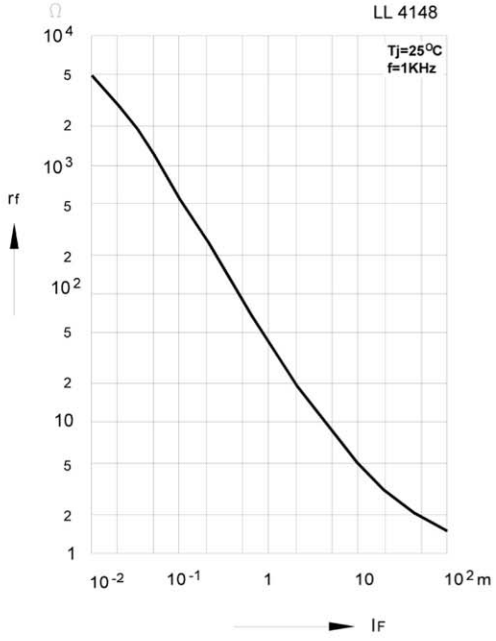



**Rectification Efficiency Measurement Circuit**

**Forward characteristics**

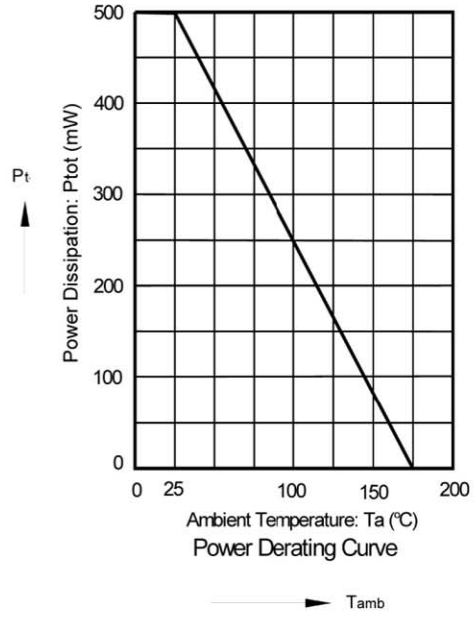



**Dynamic forward resistance versus forward current**

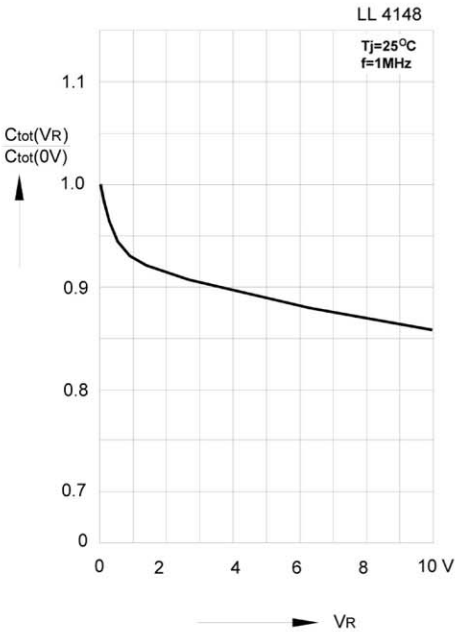



**Admissible power dissipation versus ambient temperature**

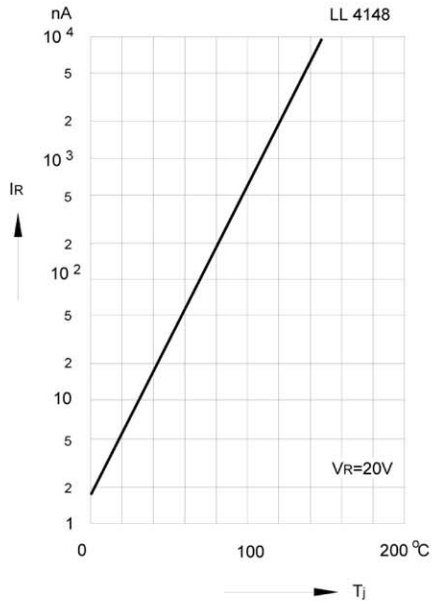
Valid provided that electrodes are kept at ambient temperature




**Relative capacitance versus reverse voltage**



**Leakage current**
**versus junction temperature**




**Admissible repetitive peak forward current versus pulse duration**
**Valid provided that electrodes are kept at ambient temperature**