



Features:

- Silicon Epitaxial Diode
- High Speed Switching Diode
- 500mW Power Dissipation

Mechanical Data:

- Case: MINI-MELF glass case
- Polarity: Colour band denotes cathode
- Weight: Approx. 0.031g

Maximum Ratings and Electrical Characteristics:

Ratings at 25°C ambient temperature unless otherwise specified

| Characteristics | Symbol | LL4148-13 | Units |
|--|-----------|-------------|-------|
| Reverse voltage | V_R | 75 | V |
| Peak reverse voltage | V_{RM} | 100 | V |
| Average forward rectified current Half wave rectification with resistive load at $t_a=25^\circ\text{C}$ and $f \geq 50\text{Hz}$ | I_o | 150 | mA |
| Forward surge current at $t < 1\text{S}$ and $T_J=25^\circ\text{C}$ (Note 1) | I_{FSM} | 500 | mA |
| Power dissipation at $T_A=25^\circ\text{C}$ | P_{tot} | 500 | mW |
| Junction temperature | T_J | 175 | °C |
| Storage temperature range | T_{STG} | -55 to +175 | °C |

Note:

(1) Valid provided that electrodes are kept at ambient temperature

Electrical Characteristics:

| Characteristics | | Min. | Typ. | Max. | Units |
|---|------------------|------|------|---------------|--------------------------------------|
| 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 $V_R=20\text{V } T_J=150^\circ\text{C}$ | I_R | - | - | 25 5 50 | nA μA μA |
| Capacitance at $V_F=V_R=0\text{V}$ | C_{tot} | - | - | 4 | pF |
| Voltage rise when switching on tested with 50mA pulses $t_p=0.1\mu\text{s}$, rise time <30ns, $f_p=5$ to 100kHz | V_{fr} | - | - | 2.5 | V |
| Reverse recovery time from $I_F=10\text{mA}$ $V_R=6\text{V}$, $R_L=100\Omega$, at $I_R=1\text{mA}$ | t_{rr} | - | - | 4 | ns |
| Thermal resistance junction to ambient (Note1) | $R_{\theta JA}$ | | | 350 | K/W |
| Rectification efficiency at 100MHz, $V_{\text{RF}}=2\text{V}$ | η_V | 0.45 | - | - | - |

Note

(1) Valid provided that electrodes are kept at ambient temperature

Fig. 1- Admissible Power Dissipation Versus Ambient Temperature

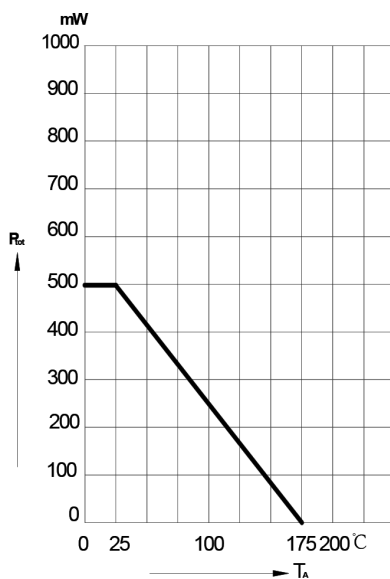


Fig. 2- Forward Characteristics

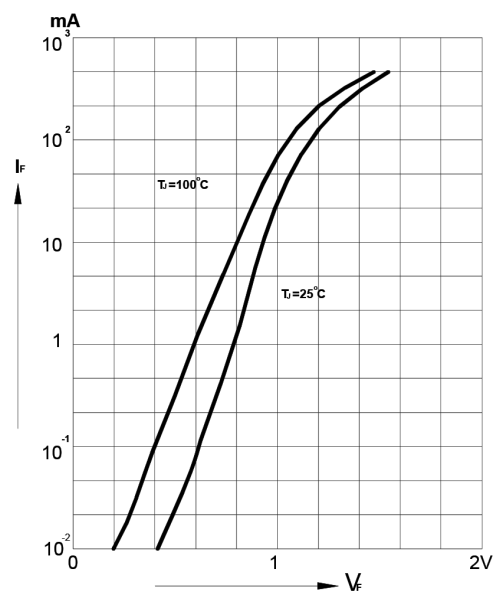
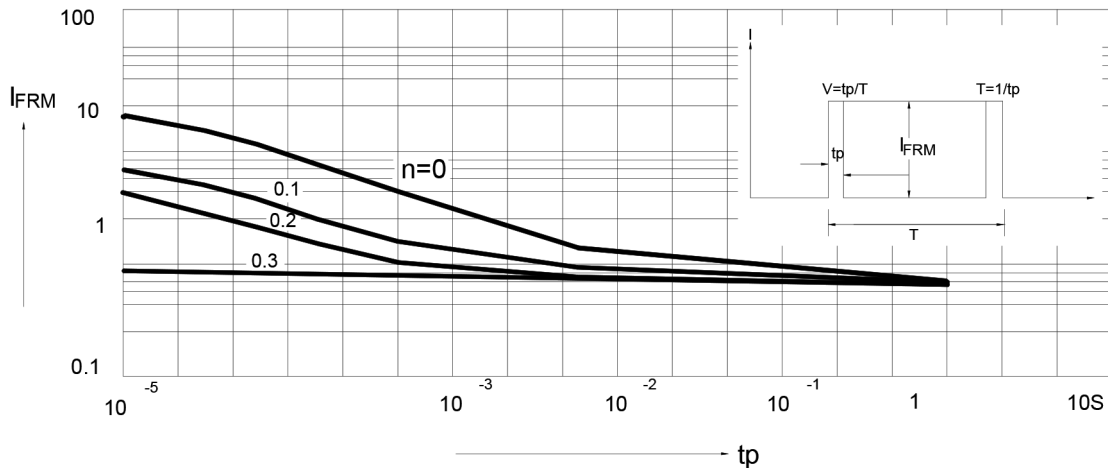
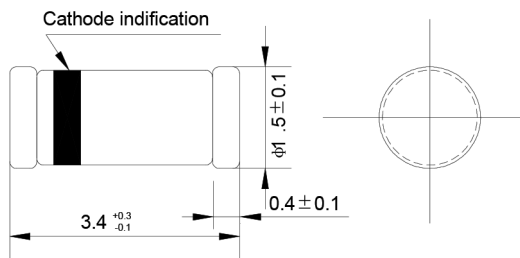


Fig. 3 -Admissible Repetitive Peak Forward Current Versus Pulse Duration



Dimensions:



Dimensions : Millimetres

Part Number Table

| Description | Part Number |
|------------------------------|-------------|
| Small Signal Switching Diode | LL4148-13 |

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