



# LL4148

## SWITCHING DIODE

REVERSE VOLTAGE:75 VOLTS

CURRENT:0.15 AMPERES

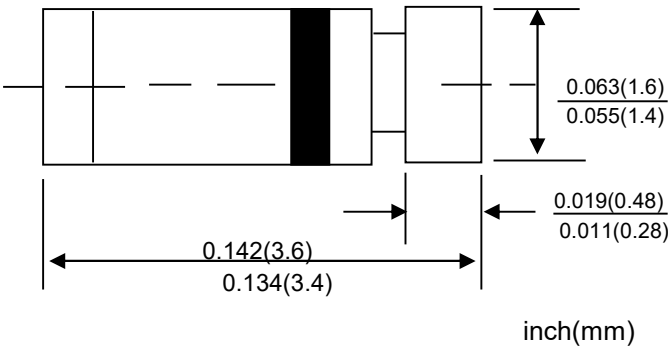
### FEATURES

- Silicon epitaxial planar diode
- High speed switching diode
- 500mV power dissipation
- These diodes are also available in glass case  
Mini-MELF,SOD-323,SOT-323

### MECHANICAL DATA

Case:DO-35,Glass Case  
Polarity: Color band denotes cathode  
Weight: 0.029 gram

### Mini-MELF



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

### MAXIMUN RATINGS

| Parameters                                                                                                                                    | Symbols   | Value             | 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 $T_{amb}=25\text{ }^{\circ}\text{C}$ and $f\geq 50\text{HZ}$ | $I_o$     | 150               | mA    |
| Forward Surge Current                                                                                                                         | $I_{FSM}$ | 500               | mA    |
| Power Dissipation                                                                                                                             | $P_{tot}$ | 500 <sup>1)</sup> | mW    |
| Junction Temperature                                                                                                                          | $T_J$     | 175               | °C    |
| Storage Temperature Range                                                                                                                     | $T_{sTG}$ | -65---+175        | °C    |

### ELECTRICAL CHARACTERISTICS

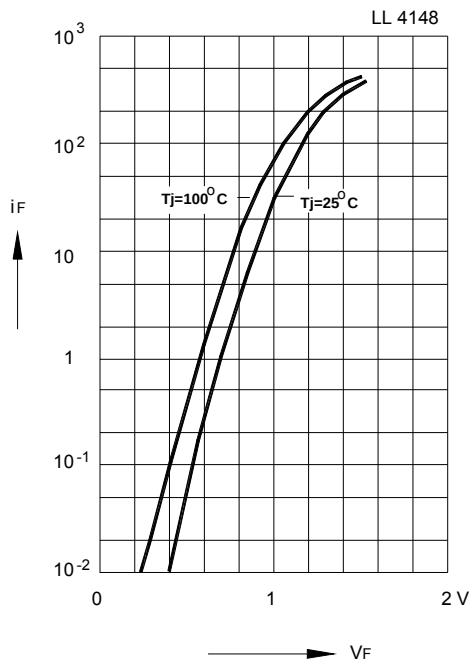
| Parameters                                                                                                                | Symbol          | MIN  | MAX               | UNITS |
|---------------------------------------------------------------------------------------------------------------------------|-----------------|------|-------------------|-------|
| Forward Voltage at $I_F=100\text{mA}$                                                                                     | $V_F$           |      | 1                 | V     |
| Leakage Current at $V_R=20\text{V}$                                                                                       | $I_R$           |      | 25                | nA    |
| at $V_R=75\text{V}$                                                                                                       | $I_R$           |      | 5                 | μA    |
| at $V_R=20\text{V}$ $T_J=150^{\circ}\text{C}$                                                                             | $I_R$           |      | 50                | μA    |
| Voltage Rise when Switching ON Tested with 50mA pulses $t_p=0.1\mu\text{s}$ . Rise Time $<30\text{ns}$ . $f_p=5$ to 100HZ | $V_{fr}$        |      | 2.5               | V     |
| Capacitance at $V_F=V_R=0\text{V}$ , $f=1\text{MHZ}$                                                                      | $C_{tot}$       |      | 4                 | pF    |
| Reverse Recovery Time= $I_F=10\text{mA}$ , $V_R=6\text{V}$ , $I_R=1\text{mA}$ , $R_L=100\Omega$                           | $t_{rr}$        |      | 4                 | ns    |
| Thermal Resistance Junction to Ambient                                                                                    | $R_{\theta JA}$ |      | 350 <sup>1)</sup> | K/W   |
| Rectification Efficiency at 100MHZ, $V_{FR}=2\text{V}$                                                                    | $\eta_V$        | 0.45 |                   |       |

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

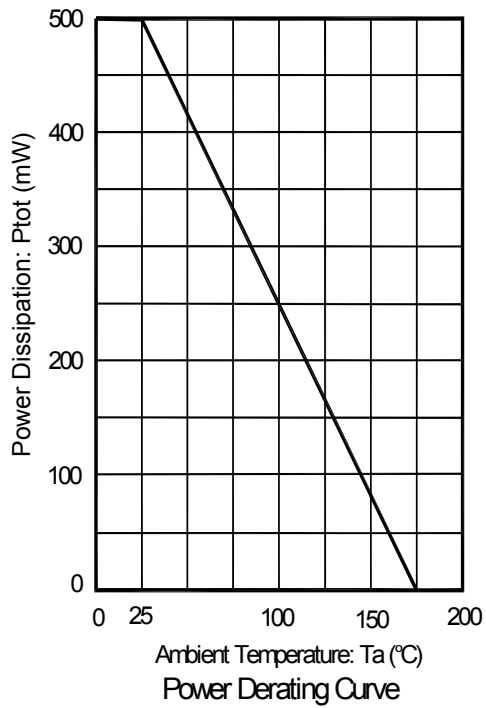
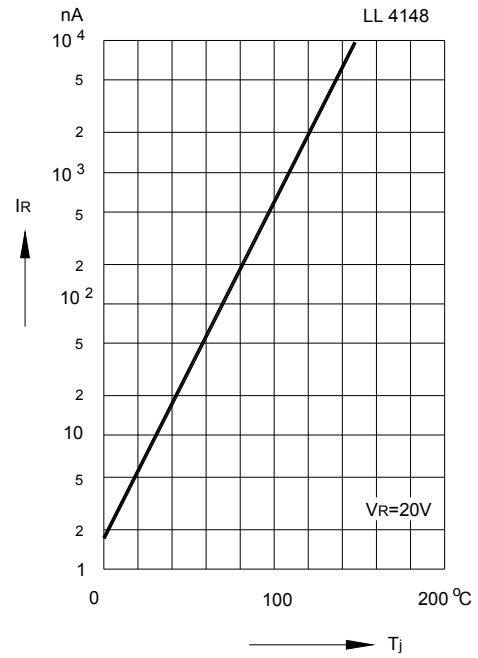


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Forward characteristics



Leakage current versus junction temperature



Relative capacitance versus reverse voltage

