

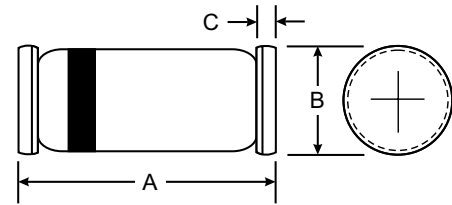


### Features

- Silicon Epitaxial Planar Diodes
- Micro Melf package

### Mechanical Data

- Case: SOD-80/LL34, Glass
- Terminals: Solderable per MIL-STD-202,
- Method 208
- Polarity: Cathode Band
- Weight: 0.05 grams (approx.)



| LL34/ SOD-80                |      |      |
|-----------------------------|------|------|
| Dim                         | Min  | Max  |
| <b>A</b>                    | 3.30 | 3.70 |
| <b>B</b>                    | 1.30 | 1.60 |
| <b>C</b>                    | 0.28 | 0.50 |
| <b>All Dimensions in mm</b> |      |      |

### Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise specified

| Parameter                       | Test condition        | Symbol    | Value | Unit |
|---------------------------------|-----------------------|-----------|-------|------|
| Repetitive peak reverse voltage |                       | $V_{RRM}$ | 35    | V    |
| Reverse voltage                 |                       | $V_R$     | 25    | V    |
| Peak forward surge current      | $t_p = 1 \mu\text{s}$ | $I_{FSM}$ | 2     | A    |
| Repetitive peak forward current |                       | $I_{FRM}$ | 450   | mA   |
| Forward continuous current      |                       | $I_F$     | 200   | mA   |
| Average forward current         | $V_R = 0$             | $I_{FAV}$ | 150   | mA   |
| Power dissipation               |                       | $P_{tot}$ | 500   | mW   |

### Thermal Characteristics $T_{amb} = 25^\circ\text{C}$ , unless otherwise specified

| Parameter                 | Test condition   | Symbol     | Value         | Unit             |
|---------------------------|--|------------|---------------|------------------|
| Junction to ambient air   | mounted on epoxy-glass hard tissue, Fig. 4,<br>35 $\mu\text{m}$ copper clad, 0.9 $\text{mm}^2$ copper area per electrode | $R_{thJA}$ | 500           | K/W              |
| Junction temperature      |  | $T_j$      | 175           | $^\circ\text{C}$ |
| Storage temperature range |  | $T_{stg}$  | - 65 to + 175 | $^\circ\text{C}$ |

### Electrical Characteristics $T_{amb} = 25^\circ\text{C}$ , unless otherwise specified

| Parameter             | Test condition   | Symbol     | Min | Typ. | Max  | Unit          |
|-----------------------|--|------------|-----|------|------|---------------|
| Forward voltage       | $I_F = 30 \text{ mA}$  | $V_F$      |     |      | 1000 | mV            |
| Reverse current       | $V_R = 25 \text{ V}$   | $I_R$      |     |      | 100  | nA            |
|                       | $V_R = 25 \text{ V}, T_j = 150^\circ\text{C}$                                    | $I_R$      |     |      | 100  | $\mu\text{A}$ |
| Breakdown voltage     | $I_R = 5 \mu\text{A}, t_p/T = 0.01, t_p = 0.3 \text{ ms}$                        | $V_{(BR)}$ | 35  |      |      | V             |
| Diode capacitance     | $V_R = 0, f = 1 \text{ MHz}, V_{HF} = 50 \text{ mV}$                             | $C_D$      |     |      | 4    | pF            |
| Reverse recovery time | $I_F = I_R = 10 \text{ mA}, i_R = 1 \text{ mA}$                                  | $t_{rr}$   |     |      | 4    | ns            |
|                       | $I_F = 10 \text{ mA}, V_R = 6 \text{ V}, i_R = 0.1 \times I_R, R_L = 100 \Omega$ | $t_{rr}$   |     |      | 2    | ns            |

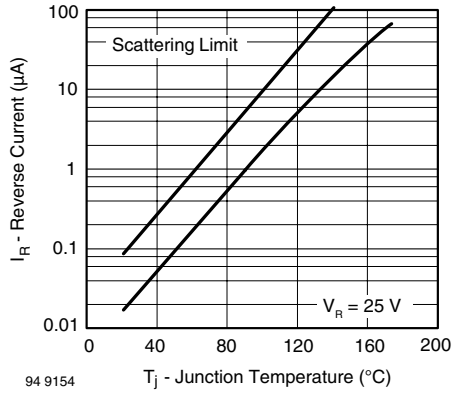


Figure 1. Reverse Current vs. Junction Temperature

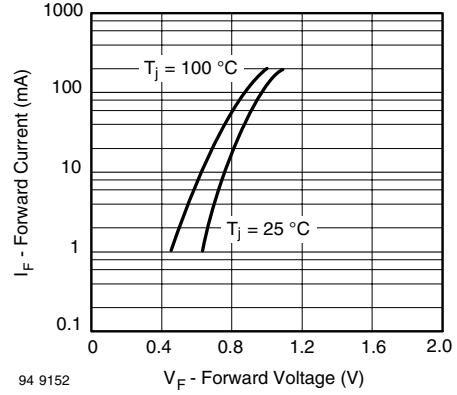


Figure 2. Forward Current vs. Forward Voltage

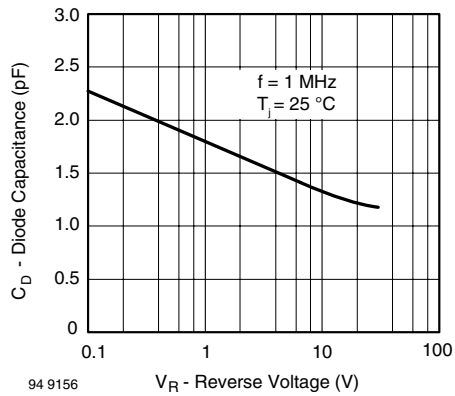


Figure 3. Diode Capacitance vs. Reverse Voltage

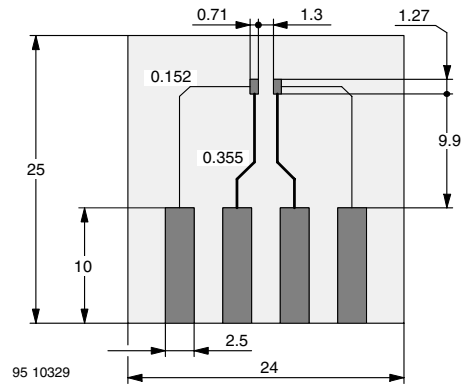


Figure 4. Board for  $R_{thJA}$  definition (in mm)