

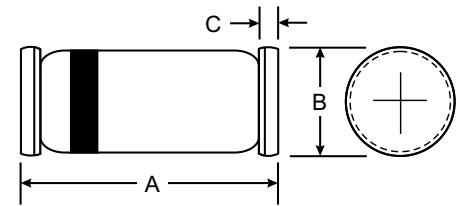


Features

- Integrated protection ring against static discharge
- Low capacitance
- Low leakage current
- Low forward voltage drop

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 |
| A | 3.30 | 3.70 |
| B | 1.30 | 1.60 |
| C | 0.28 | 0.50 |
| All Dimensions in mm | | |



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

| Parameter | Test condition | Part | Symbol | Value | Unit |
|----------------------------|--|--------|-----------|-------|------|
| Reverse voltage | | LS103A | V_R | 40 | V |
| | | LS103B | V_R | 30 | V |
| | | LS103C | V_R | 20 | V |
| Peak forward surge current | $t_p = 300 \mu\text{s}$, square pulse | | I_{FSM} | 15 | A |
| Power dissipation | $l = 4 \text{ mm}$, $T_L = \text{constant}$ | | P_{tot} | 400 | mW |

Thermal Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Parameter | Test condition | Symbol | Value | Unit |
|---------------------------|--|------------|---------------|------------------|
| Junction ambient | $l = 4 \text{ mm}$, $T_L = \text{constant}$ | R_{thJA} | 250 | K/W |
| Junction temperature | | T_j | 125 | $^\circ\text{C}$ |
| Storage temperature range | | T_{stg} | - 65 to + 150 | $^\circ\text{C}$ |

Electrical Characteristics

| Parameter | Test condition | Part | Symbol | Min | Typ. | Max | Unit |
|---------------------------|--|--------|-------------|-----|------|------|---------------|
| Reverse Breakdown Voltage | $I_R = 10 \mu\text{A}$ | LS103A | $V_{(BR)R}$ | 40 | | | V |
| | | LS103B | $V_{(BR)R}$ | 30 | | | V |
| | | LS103C | $V_{(BR)R}$ | 20 | | | V |
| Leakage current | $V_R = 30 \text{ V}$ | LS103A | I_R | | | 5 | μA |
| | $V_R = 20 \text{ V}$ | LS103B | I_R | | | 5 | μA |
| | $V_R = 10 \text{ V}$ | LS103C | I_R | | | 5 | μA |
| Forward voltage drop | $I_F = 20 \text{ mA}$ | | V_F | | | 0.37 | V |
| | $I_F = 200 \text{ mA}$ | | V_F | | | 0.6 | V |
| Diode capacitance | $V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$ | | C_D | | 50 | | pF |
| Reverse recovery time | $I_F = I_R = 50 \text{ to } 200 \text{ mA}$, recover to $0.1 I_R$ | | t_{rr} | | 10 | | ns |

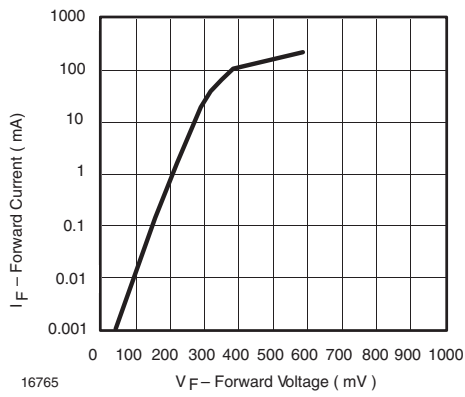


Fig. 1 Forward Current vs. Forward Voltage

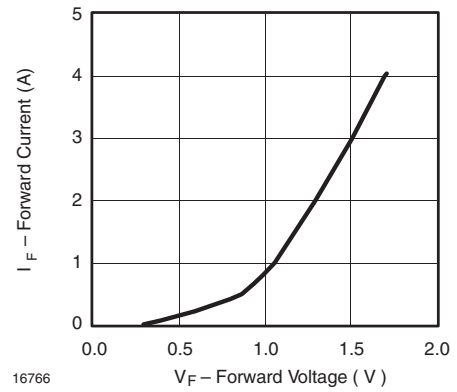


Fig. 2 Forward Current vs. Forward Voltage

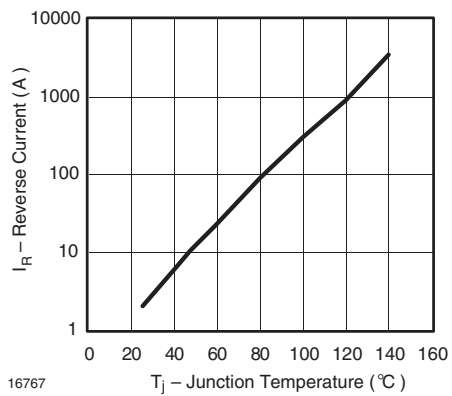


Fig. 3 Reverse Current vs. Junction Temperature

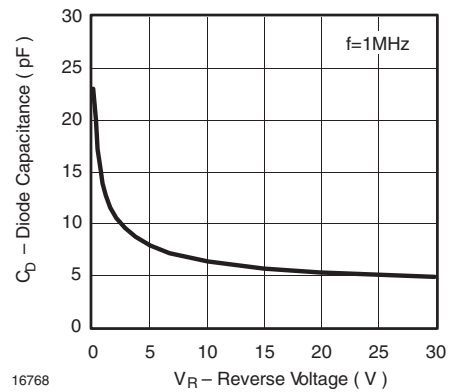


Fig. 4 Diode Capacitance vs. Reverse Voltage

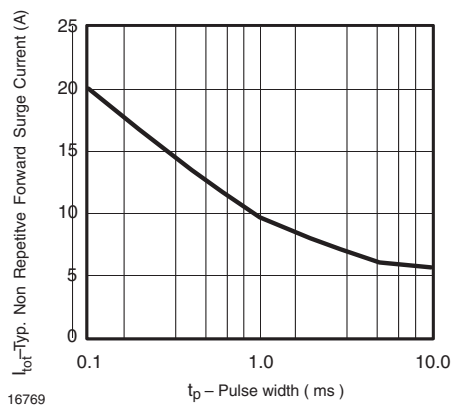


Fig. 5 Typ. Non Repetitive Forward Surge Current vs. Pulse width