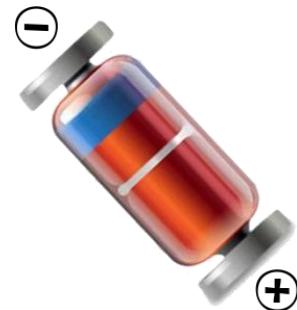


SCHOTTKY BARRIER DIODE
FEATURES

- For general purpose applications
- This diode features very low turn-on voltage and fast switching. These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges


LL-34
MECHANICAL DATA

- Case: LL-34
- Case Material: Glass
- Polarity: Color band denotes cathode end


MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbols | Value | UNITS |
|---|-----------|-------------------|------------------|
| Continuous reverse voltage | V_R | 50 | V |
| Forward continuous current @ $T_A=25^\circ\text{C}$ | I_F | 200 ¹⁾ | mA |
| Peak forward current @ $T_A=25^\circ\text{C}$ | I_{FM} | 500 ¹⁾ | mA |
| Surge forward current @ $t_p < 1\text{s}, T_A=25^\circ\text{C}$ | I_{FSM} | 5 ¹⁾ | A |
| Power dissipation @ $T_A=65^\circ\text{C}$ | P_{tot} | 200 ¹⁾ | mW |
| Junction temperature | T_J | 125 | $^\circ\text{C}$ |
| Ambient operating temperature range | T_A | -55 ---+ 125 | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55 ---+ 150 | $^\circ\text{C}$ |

1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

| | Symbols | Min. | Typ. | Max. | UNITS |
|---|-----------------|------|------|--------------------------------------|--------------------|
| Reverse breakdown voltage | V_R | 50.0 | | | V |
| Forward voltage Pulse test $t_p < 300 \mu\text{s}, \delta < 2\%$ @ $I_f = 0.1\text{mA}$ @ $I_f = 1\text{mA}$ @ $I_f = 10\text{mA}$ @ $I_f = 30\text{mA}$ @ $I_f = 100\text{mA}$ | V_F | | | 0.30 0.38 0.45 0.60 0.90 | V |
| Leakage current $V_R = 40\text{V}$ | I_R | | | 5.0 | μA |
| Diode capacitance at $V_R = 1\text{V}, f = 1\text{MHz}$ | C_d | | | 8 | pF |
| Reverse recovery time @ $I_f = 10\text{mA}, I_R = 10\text{mA}, I_f = 1\text{mA}$ | t_{rr} | | | 5 | ns |
| Thermal resistance junction to ambient | $R_{\theta JA}$ | | | 430 ¹⁾ | $^\circ\text{C/W}$ |

1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature

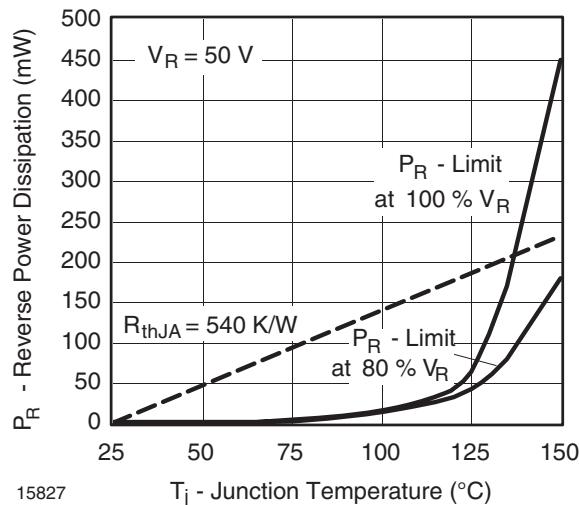
SCHOTTKY BARRIER DIODE
Typical Characteristics


Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

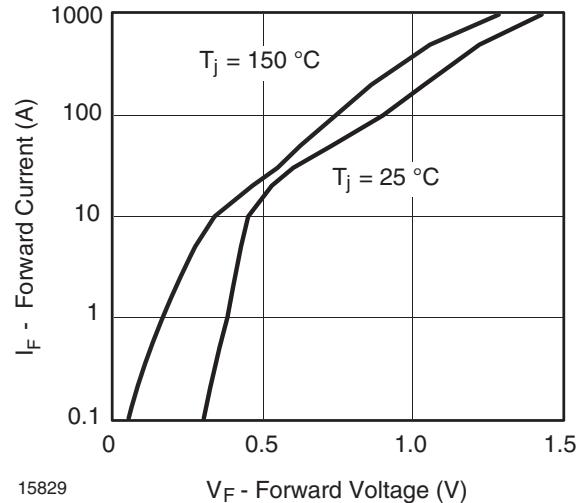


Figure 3. Forward Current vs. Forward Voltage

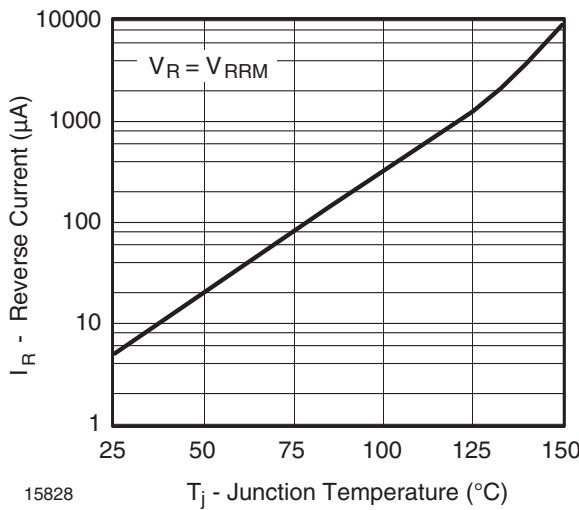


Figure 2. Reverse Current vs. Junction Temperature

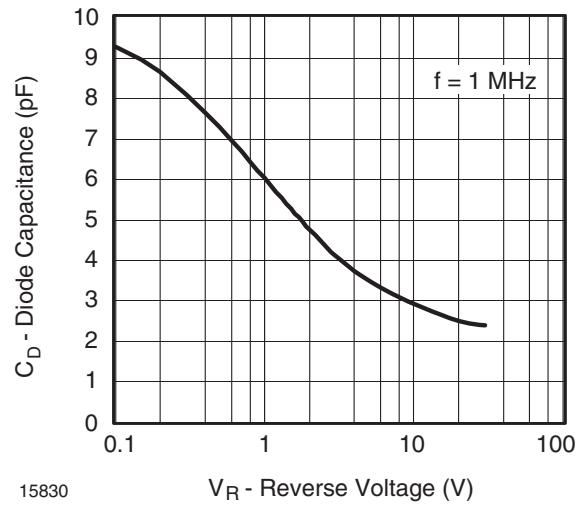
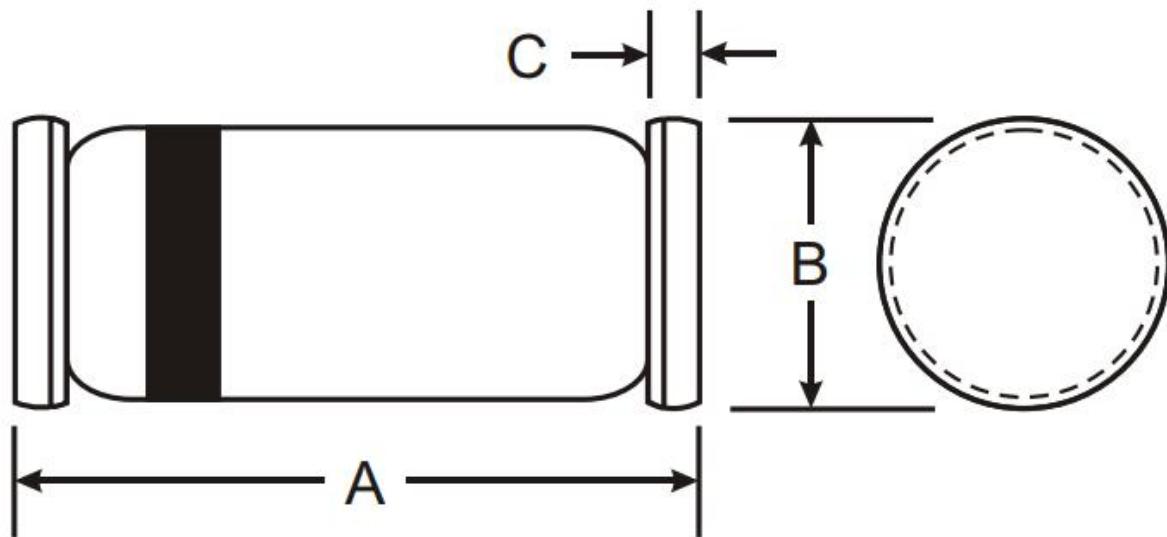
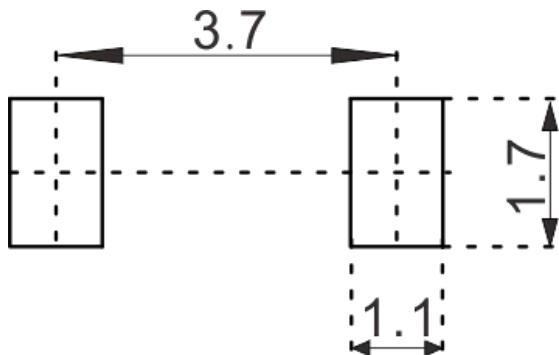


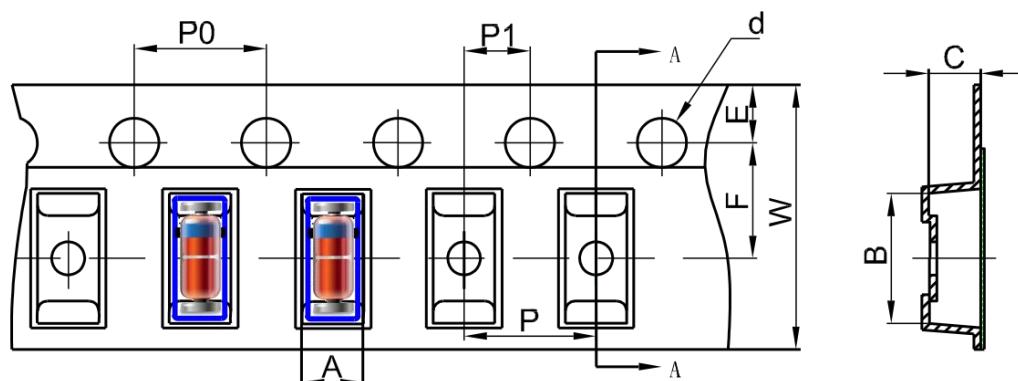
Figure 4. Diode Capacitance vs. Reverse Voltage

SCHOTTKY BARRIER DIODE
LL-34 Package Outline Dimensions


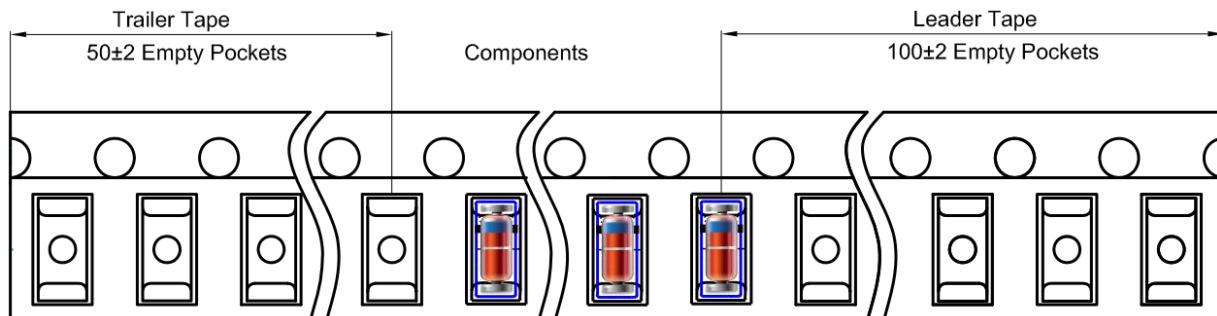
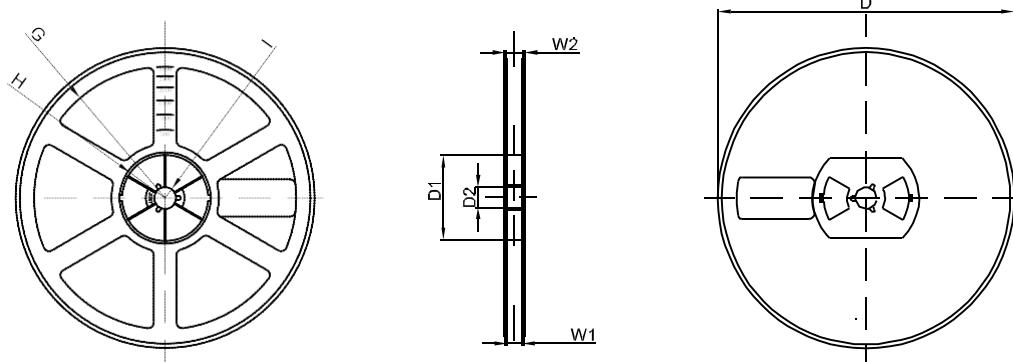
| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 3.300 | 3.700 | 0.130 | 0.147 |
| B | 1.300 | 1.600 | 0.051 | 0.063 |
| C | 0.280 | 0.500 | 0.011 | 0.020 |

LL-34 Suggested Pad Layout

Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

SCHOTTKY BARRIER DIODE
LL-34 Tape and Reel
LL-34 Embossed Carrier Tape


| TYPE | DIMENSIONS ARE IN MILLIMETER | | | | | | | | | |
|-----------|------------------------------|-------|-------|-------|------|------|------|------|------|------|
| | A | B | C | d | E | F | P0 | P | P1 | W |
| LL-34 | 1.60 | 3.90 | 1.60 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |
| TOLERANCE | ±0.05 | ±0.05 | ±0.05 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 |

LL-34 Tape Leader and Trailer

LL-34 Reel


| REEL OPTION | DIMENSIONS ARE IN MILLIMETER | | | | | | | |
|-------------|------------------------------|-------|-------|-----|--------|-------|------|-------|
| | D | D1 | D2 | G | H | I | W1 | W2 |
| 7" DIA | Ø178 | 54.40 | 13.00 | R78 | R25.60 | R6.50 | 9.50 | 12.30 |
| TOLERANCE | ±2 | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 |