



SEMICONDUCTOR

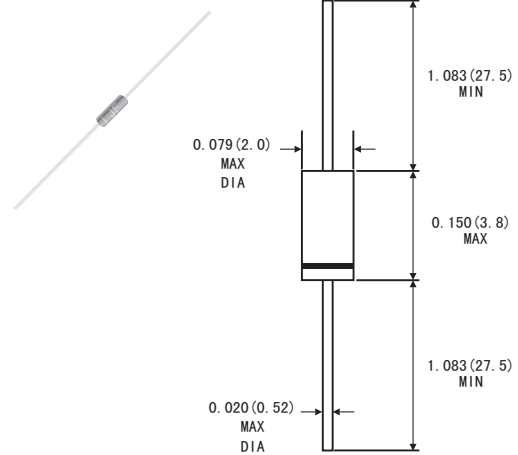
BAT86

SMALL SIGNAL SCHOTTKY DIODES

FEATURES

- For general purpose applications
- These diodes 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.
- Metal-on- silicon Schottky barrier device which is protected by a PN junction guard ring. The low forward voltage drop and fast switching make it ideal for protection of MOS devices, steering, biasing and coupling diodes for fast switching and low logic level applications
- This diode is also available in the MiniMELF case with the type designation LL86.
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU

DO-35



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: DO-35 glass case
- Polarity: Color band denotes cathode end
- Weight: Approx. 0.13 gram

ABSOLUTE RATINGS(LIMITING VALUES)

| | Symbols | Value | Units |
|---|-----------|-------------------|------------------|
| Continuous Reverse Voltage | V_R | 50 | V |
| Forward Continuous Current at $T_A=25^\circ\text{C}$ | I_F | 200 ¹⁾ | mA |
| Repetitive Peak Forward Current at $t_p < 1\text{s}, \delta \leq 0.5, T_A=25^\circ\text{C}$ | I_{FRM} | 300 ¹⁾ | mA |
| Power Dissipation at $T_A=65^\circ\text{C}$ | P_{tot} | 200 ¹⁾ | mW |
| Junction temperature | T_J | 125 | $^\circ\text{C}$ |
| Ambient Operating temperature Range | T_A | -55 to+125 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -55 to+150 | $^\circ\text{C}$ |

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

ELECTRICAL CHARACTERISTICS

| | Symbols | Min. | Typ. | Max. | Unis |
|---|---|------|---|---|-----------------------|
| Reverse breakdown voltage Tested with 10 μA Pulses | $V_{(BR)R}$ | 50 | | | V |
| Forward voltage Pulse Test $t_p < 300\mu\text{s}, \delta < 2\%$ at $I_F=0.1\text{mA}$, at $I_F=1\text{mA}$, at $I_F=10\text{mA}$, at $I_F=30\text{mA}$, at $I_F=100\text{mA}$ | V_F V_F V_F V_F V_F | | 0.200 0.272 0.365 0.460 0.700 | 0.300 0.380 0.450 0.600 0.900 | V V V V V |
| Leakage current $V_R=25\text{V}$ | I_R | | 0.2 | 0.5 | μA |
| Junction Capacitance at $V_R=1\text{V}, f=1\text{MHz}$ | C_J | | | 8 | pF |
| Reverse recovery time Form $I_F=10\text{mA}$ to $I_R=10\text{mA}$ to $I_R=1\text{mA}$ | t_{rr} | | | 5 | ns |
| Thermal resistance junction to ambient Air | $R_{\theta JA}$ | | | 300 ¹⁾ | $^\circ\text{C/W}$ |

1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature(DO-35)