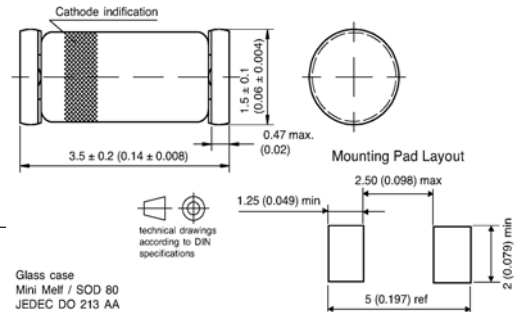


## Features

- ◆ For general purpose applications.
- ◆ This diode features low turn-on voltage. This device 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 DO-35 case with type designation BAT86.



## Mechanical Data

- ◆ Case: MiniMELF Glass Case (SOD-80)
- ◆ Weight: approx. 0.05g
- ◆ Cathode Band Color: Green

## Maximum Ratings and Thermal Characteristics

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

| Parameter   | Symbol          | Value              | Unit               |
|---|-----------------|--------------------|--------------------|
| Continuous reverse voltage  | $V_R$           | 50                 | Volts              |
| Forward continuous current at $T_{amb}=25^\circ\text{C}$  | $I_F$           | 200 <sup>(1)</sup> | mA                 |
| Repetitive peak forward current at $t_p < 1\text{s}$ , $\nu < 0.5$ , $T_{amb}=25^\circ\text{C}$ | $I_{FRM}$       | 500 <sup>(1)</sup> | mA                 |
| Power dissipation at $T_{amb}=25^\circ\text{C}$   | $P_{tot}$       | 200 <sup>(1)</sup> | mW                 |
| Thermal resistance junction to ambient air  | $R_{\theta JA}$ | 300 <sup>(1)</sup> | $^\circ\text{C/W}$ |
| Junction temperature  | $T_J$           | 125                | $^\circ\text{C}$   |
| Ambient operating temperature range   | $T_{amb}$       | -65 to +125        | $^\circ\text{C}$   |
| Storage temperature range   | $T_S$           | -65 to +150        | $^\circ\text{C}$   |

**Notes:** 1. Valid provided that electrodes are kept at ambient temperature.

## Electrical Characteristics

( $T_j=25^\circ\text{C}$  unless otherwise noted.)

| Parameter                 | Symbol      | Test Condition   | Min.                  | Typ.                                      | Max.                                      | Unit          |
|---------------------------|-------------|--|-----------------------|---|---|---------------|
| Reverse breakdown voltage | $V_{(BR)R}$ | $I_R=10\mu\text{A}$ (pulsed)   | 50                    | -   | -   | Volts         |
| Leakage current           | $I_R$       | $V_R=25\text{V}$   | -                     | 0.2                                       | 0.5                                       | $\mu\text{A}$ |
| Forward voltage           | $V_F$       | Pulse Test $t_p<300\mu\text{s}$ , $\delta<2\%$<br>$I_F=0.1\text{mA}$<br>$I_F=1\text{mA}$<br>$I_F=10\text{mA}$<br>$I_F=30\text{mA}$<br>$I_F=100\text{mA}$ | -<br>-<br>-<br>-<br>- | 0.200<br>0.275<br>0.365<br>0.460<br>0.700 | 0.300<br>0.380<br>0.450<br>0.600<br>0.900 | Volt          |
| Capacitance               | $C_{tot}$   | $V_R=1\text{V}$ , $f=1\text{MHz}$  | -                     | -   | 8   | $\text{pF}$   |
| Reverse recovery time     | $t_{rr}$    | $I_F=10\text{mA}$ , $I_R=10\text{mA}$ ,<br>$I_F=1\text{mA}$  | -                     | -   | 5   | $\text{ns}$   |