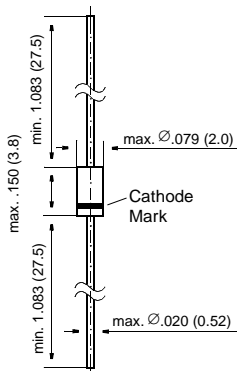


# BAT86

## Schottky Diodes

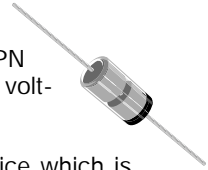
### DO-35



Dimensions in inches and (millimeters)

### FEATURES

- ◆ For general purpose applications.
- ◆ This diode features low turn-on voltage. The 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 Mini-MELF case with the type designation BAS86.



### MECHANICAL DATA

**Case:** DO-35 Glass Case

**Weight:** approx. 0.13 g

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Min.	Max.	Unit
Continuous Reverse Voltage	$V_R$	–	50	V
Forward Continuous Current at $T_{amb} = 25\text{ °C}$	$I_F$	–	200 <sup>1)</sup>	mA
Repetitive Forward Current at $t_p < 1\text{ s}$ , $\nu \leq 0.5$ , $T_{amb} = 25\text{ °C}$	$I_{FRM}$	–	500 <sup>1)</sup>	mA
Power Dissipation at $T_{amb} = 25\text{ °C}$	$P_{tot}$	–	200 <sup>1)</sup>	mW
Junction Temperature	$T_j$	–	125	°C
Ambient Operating Temperature Range	$T_{amb}$	–65	+125	°C
Storage Temperature Range	$T_S$	–65	+150	°C

<sup>1)</sup> Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature.

# BAT86

## ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Min.	Typ.	Max.	Unit
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 0.275 0.365 0.460 0.700	0.300 0.380 0.450 0.600 0.900	V V V V V
Leakage Current at $V_R = 25 \text{ V}$	$I_R$	-	0.2	0.5	$\mu\text{A}$
Reverse Breakdown Voltage tested with 10 $\mu\text{A}$ Pulses	$V_{(BR)R}$	50	-	-	V
Capacitance at $V_R = 1 \text{ V}$ , $f = 1 \text{ MHz}$	$C_{\text{tot}}$	-	-	8	pF
Thermal Resistance Junction to Ambient Air	$R_{\text{thJA}}$	-	-	300 <sup>1)</sup>	K / W
Reverse Recovery Time from $I_F = 10 \text{ mA}$ to $I_R = 10 \text{ mA}$ to $I_R = 1 \text{ mA}$	$t_{\text{rr}}$	-	-	5	ns

<sup>1)</sup> Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature.