

# BAT86

## FEATURES :

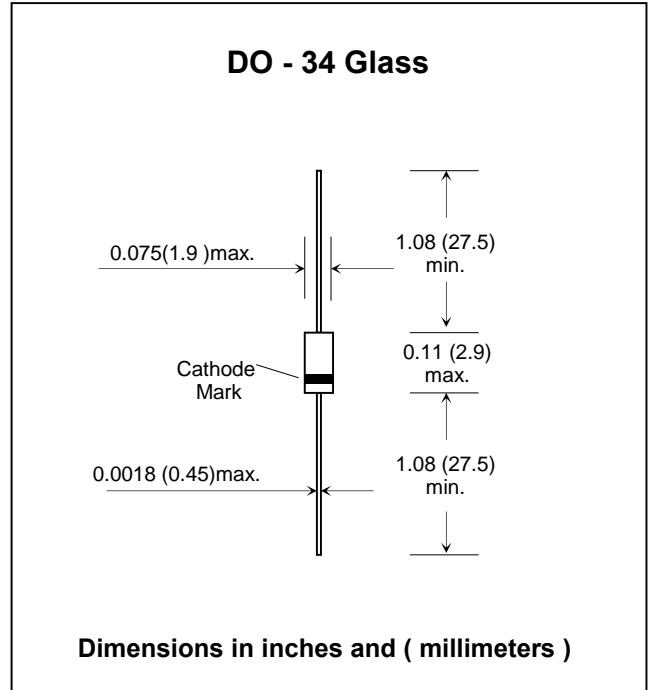
- For general purpose applications.
- This diode features low turn-on voltage. This device is protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges.
- Metal-on-silicon Schottky barrier device which is protected by a PN junction guard ring. The low forward voltage 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 type designation BAS86.
- **Pb / RoHS Free**

## MECHANICAL DATA :

**Case:** DO-34 Glass Case

**Weight:** approx. 0.11g

## SCHOTTKY BARRIER DIODE



## Maximum Ratings and Thermal Characteristics (Rating at 25 °C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Continuous Reverse Voltage	$V_R$	50	V
Continuous Forward Current	$I_F$	200 <sup>(1)</sup>	mA
Average forward current , $T_a = 50\text{ }^\circ\text{C}$	$I_{F(AV)}$	200 <sup>(1)</sup>	mA
Repetitive Peak Forward Current at $t_p < 1\text{ s}$ ,	$I_{FRM}$	500 <sup>(1)</sup>	mA
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	320 <sup>(1)</sup>	$^\circ\text{K/W}$
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Ambient Operating Temperature Range	$T_a$	-65 to + 125	$^\circ\text{C}$
Storage temperature range	$T_S$	-65 to + 150	$^\circ\text{C}$

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

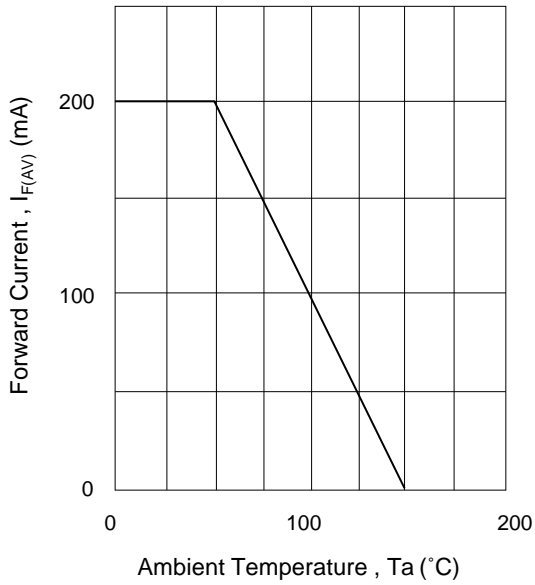
## Electrical Characteristics ( $T_J = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 10\text{ }\mu\text{A}$ (pulsed)	50	-	-	V
Reverse Current	$I_R$	$V_R = 40\text{ V}$	-	0.3	5.0	$\mu\text{A}$
Forward Voltage	$V_F$	$I_F = 1\text{ mA}$	-	0.275	0.380	V
Pulse Test $t_p < 300\mu\text{s}$ , $\delta < 2\%$		$I_F = 10\text{ mA}$	-	0.365	0.450	
		$I_F = 30\text{ mA}$	-	0.460	0.600	
		$I_F = 100\text{ mA}$	-	0.700	0.900	
Diode Capacitance	Cd	$V_R = 1\text{ V}$ , $f = 1\text{ MHz}$	-	-	8	pF
Reverse Recovery Time	$T_{rr}$	$I_F = 10\text{ mA}$ to $I_R = 10\text{ mA}$ , to $I_R = 1\text{ mA}$	-	-	4	ns

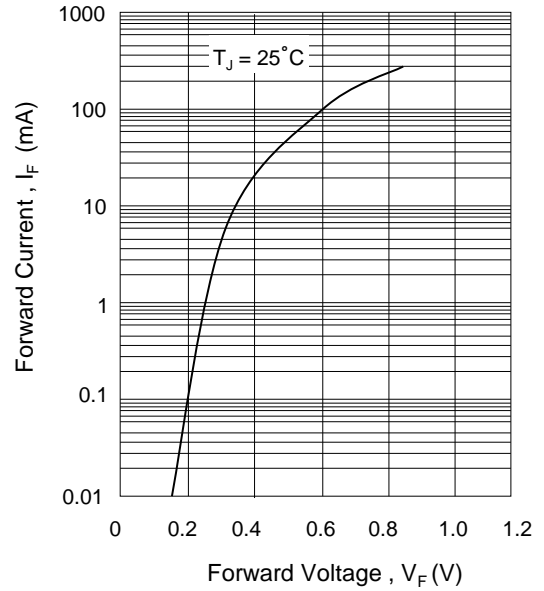


### RATING AND CHARACTERISTIC CURVES ( BAT86 )

Derating Curve



Typical forward characteristics



Typical diode capacitance as a function of reverse voltage

