

BAT86

FEATURES :

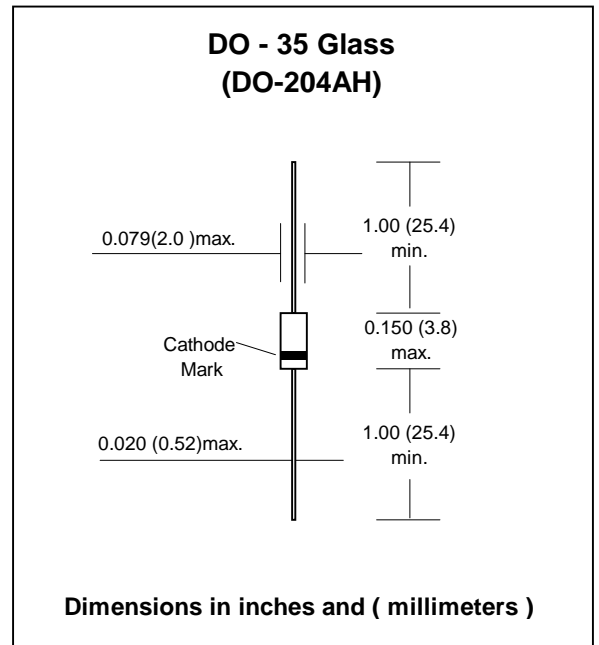
- For general purpose applications.
- This diode features low turn-on voltage. This device is protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges.
- Metal-on-silicon Schottky barrier device which is protected by a PN junction guard ring. The low forward voltage 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-35 Glass Case

Weight: approx. 0.13g

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 ⁽¹⁾	mA
Average forward current , $T_a = 50\text{ }^\circ\text{C}$	$I_{F(AV)}$	200 ⁽¹⁾	mA
Repetitive Peak Forward Current at $t_p < 1\text{ s}$,	I_{FRM}	500 ⁽¹⁾	mA
Power Dissipation	P_D	200 ⁽¹⁾	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	300 ⁽¹⁾	$^\circ\text{C/W}$
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	$^\circ\text{C}$

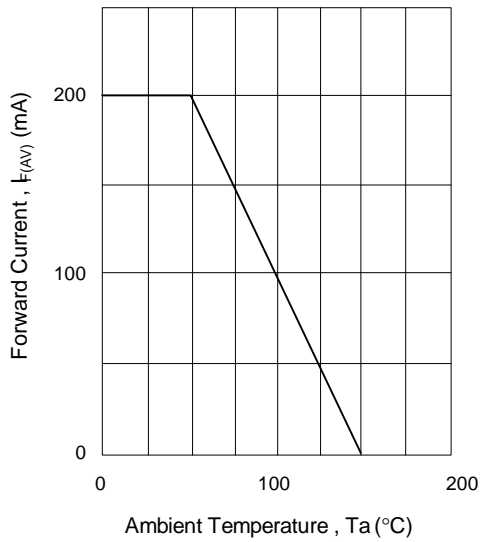
Note: (1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature.

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

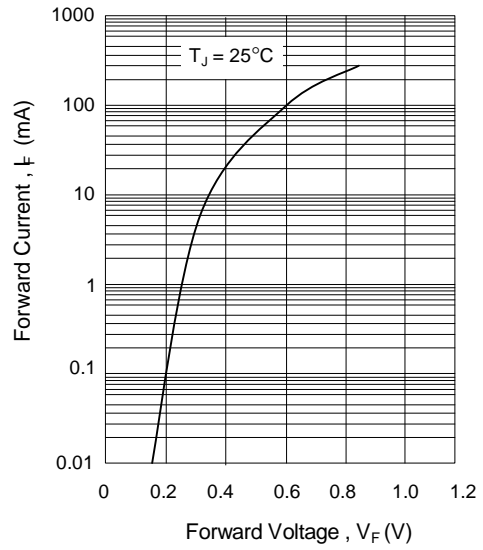
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 10\text{ }\mu\text{A}$ (pulsed)	50	-	-	V
Reverse Current	I_R	$V_R = 40\text{ V}$	-	0.3	5.0	μA
Forward Voltage	V_F	$I_F = 1\text{ mA}$	-	0.275	0.380	V
Pulse Test $t_p < 300\mu\text{s}$, $\delta < 2\%$	V_F	$I_F = 10\text{ mA}$	-	0.365	0.450	
		$I_F = 30\text{ mA}$	-	0.460	0.600	
		$I_F = 100\text{ mA}$	-	0.700	0.900	
Diode Capacitance	C_d	$V_R = 1\text{ V}$, $f = 1\text{ MHz}$	-	-	8	pF
Reverse Recovery Time	T_{rr}	$I_F = 10\text{ mA}$ to $I_R = 10\text{ mA}$, to $I_R = 1\text{ mA}$	-	-	5	ns

RATING AND CHARACTERISTIC CURVES (BAT86)

Derating Curve



Typical forward characteristics



Typical diode capacitance as a function of reverse voltage

