

DATA SHEET



BAS86 Schottky barrier diode

Product data sheet
Supersedes data of 1996 Oct 01

2000 May 25

Schottky barrier diode

BAS86

FEATURES

- Low forward voltage
- High breakdown voltage
- Guard ring protected
- Hermetically-sealed small SMD package.

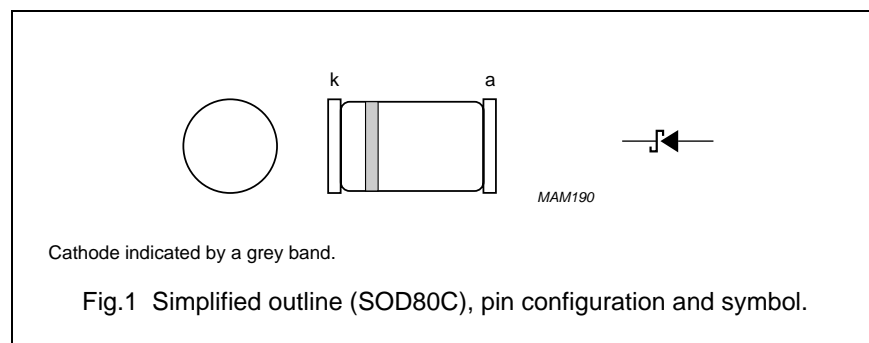
DESCRIPTION

Planar Schottky barrier diode with an integrated protection ring against static discharges.
This surface mounted diode is encapsulated in a hermetically sealed

SOD80C glass SMD package with tin-plated metal discs at each end. It is suitable for “automatic placement” and as such it can withstand immersion soldering.

APPLICATIONS

- Ultra high-speed switching
- Voltage clamping
- Protection circuits
- Blocking diodes.



LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_R	continuous reverse voltage		—	50	V
I_F	continuous forward current		—	200	mA
$I_{F(AV)}$	average forward current	see Fig.2	—	200	mA
I_{FRM}	repetitive peak forward current	$t_p \leq 1 \text{ sec.}; \delta \leq 0.5$	—	500	mA
I_{FSM}	non-repetitive peak forward current	$t_p = 10 \text{ ms}$	—	5	A
T_{stg}	storage temperature		−65	+150	°C
T_j	junction temperature		—	125	°C
T_{amb}	operating ambient temperature		−65	+125	°C

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ELECTRICAL CHARACTERISTICS $T_{amb} = 25\text{ }^{\circ}\text{C}$; unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
V_F	forward voltage	see Fig.3 $I_F = 0.1\text{ mA}$ $I_F = 1\text{ mA}$ $I_F = 10\text{ mA}$ $I_F = 30\text{ mA}$ $I_F = 100\text{ mA}$	300 380 450 600 900	mV mV mV mV mV
I_R	reverse current	$V_R = 40\text{ V}$; see Fig.4; note 1	5	μA
t_{rr}	reverse recovery time	when switched from $I_F = 10\text{ mA}$ to $I_R = 10\text{ mA}$; $R_L = 100\text{ }\Omega$; measured at $I_R = 1\text{ mA}$; see Fig.6	4	ns
C_d	diode capacitance	$f = 1\text{ MHz}$; $V_R = 1\text{ V}$; see Fig.5	8	pF

Note

1. Pulsed test: $t_p = 300\text{ }\mu\text{s}$; $\delta = 0.02$.

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	320	K/W

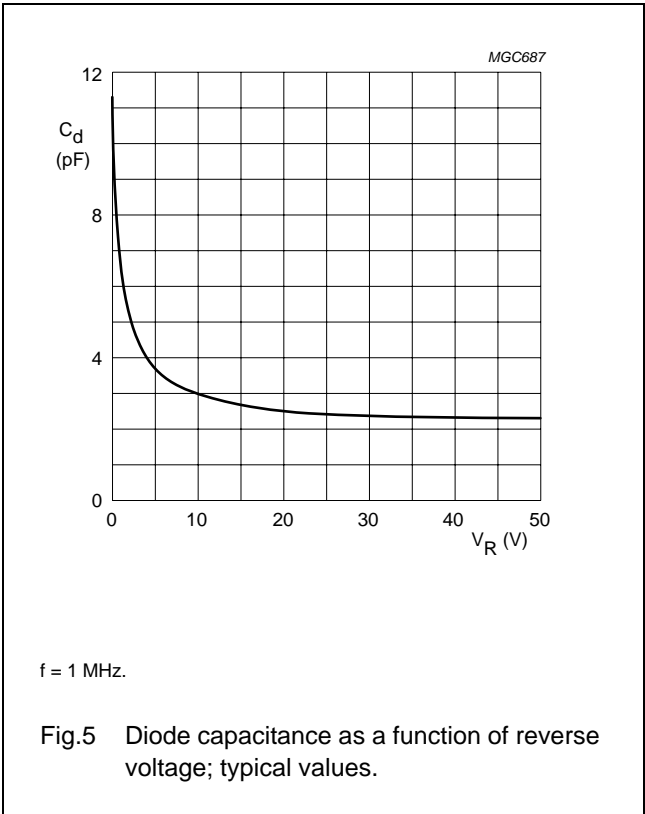
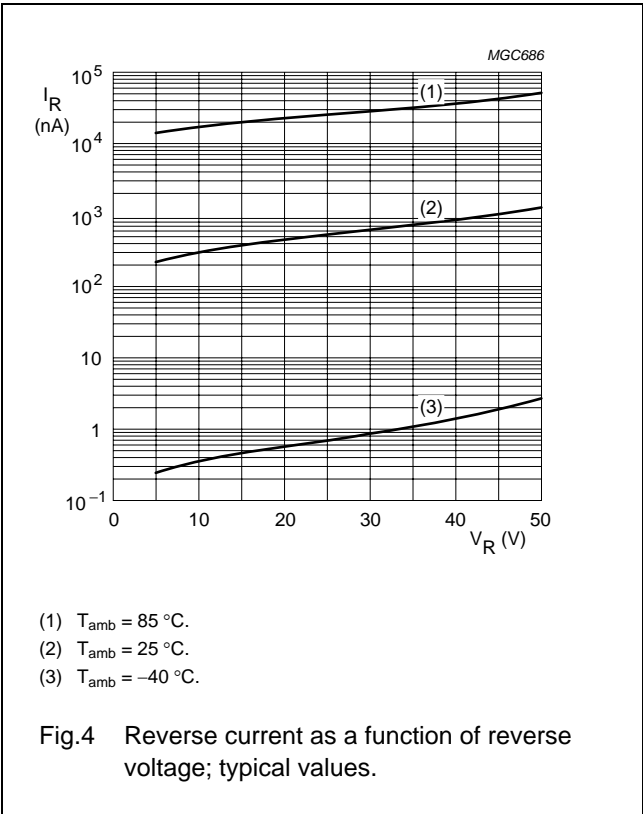
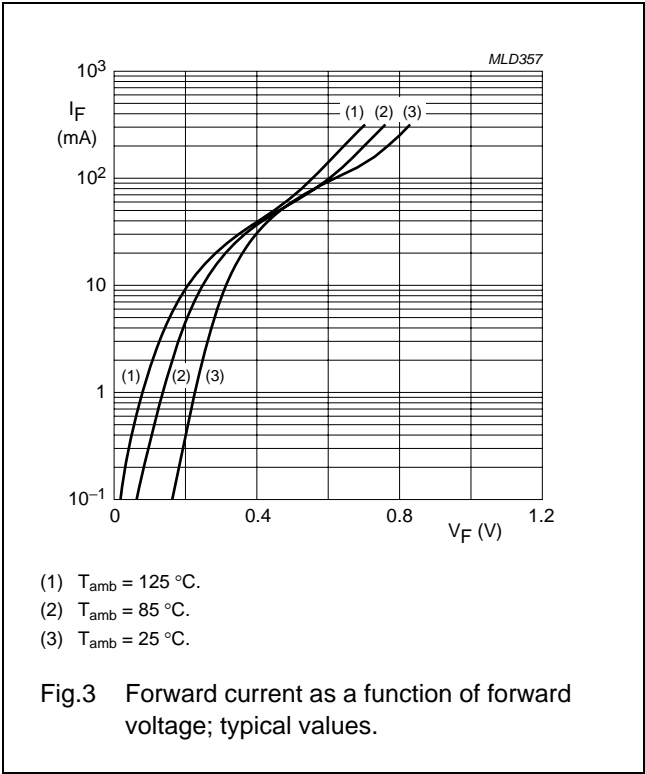
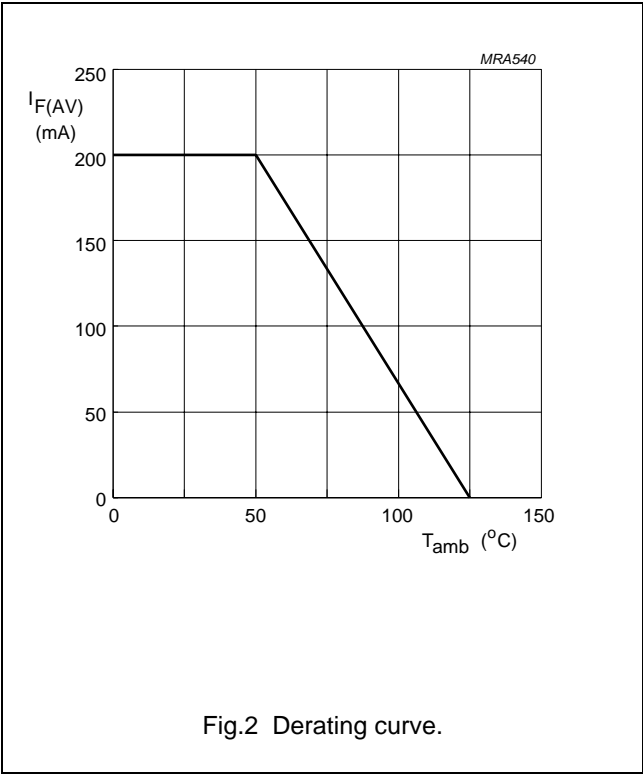
Note

1. Refer to SOD80 standard mounting conditions.

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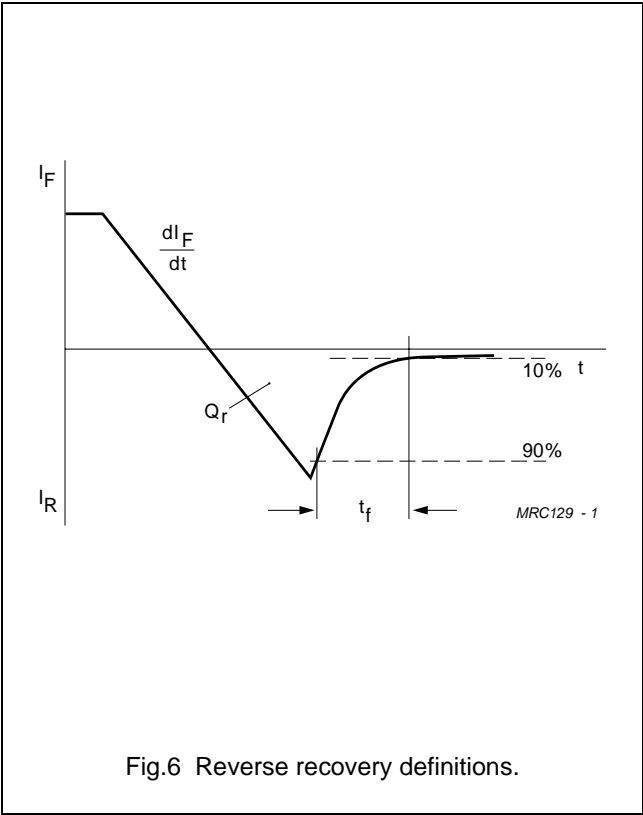
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GRAPHICAL DATA



Schottky barrier diode

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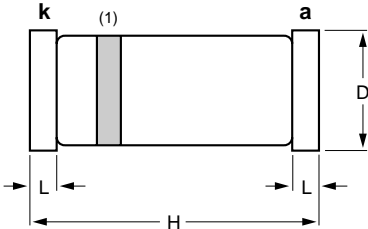
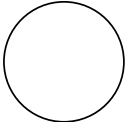
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PACKAGE OUTLINE

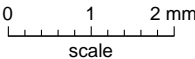
Hermetically sealed glass surface mounted package; 2 connectors

SOD80C




DIMENSIONS (mm are the original dimensions)

UNIT	D	H	L
mm	1.60 1.45	3.7 3.3	0.3



Note

1. The marking band indicates the cathode.

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOD80C	100H01					97-06-20

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DATA SHEET STATUS

DOCUMENT STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITION
Objective data sheet	Development	This document contains data from the objective specification for product development.
Preliminary data sheet	Qualification	This document contains data from the preliminary specification.
Product data sheet	Production	This document contains the product specification.

Notes

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