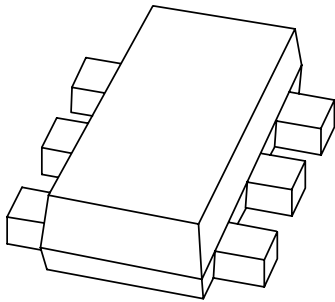


# DATA SHEET



## **BAS70-07V** Schottky barrier double diode

Product specification

2002 Jan 17

# Schottky barrier double diode

# BAS70-07V

### FEATURES

- Low forward voltage
- High reverse voltage
- Low capacitance
- Ultra small plastic SMD package
- Flat leads: excellent coplanarity and improved thermal behaviour.

### APPLICATIONS

- Ultra high-speed switching
- Voltage clamping
- Line termination
- Inverse-polarity protection
- RF applications (e.g. mixing and demodulation).

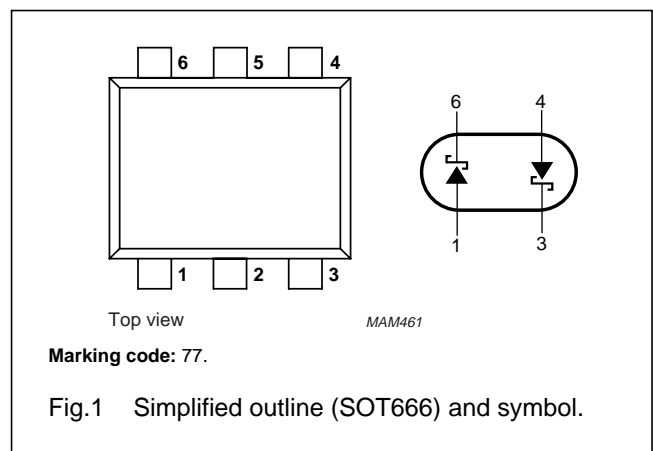
### DESCRIPTION

Planar Schottky barrier double diode with an integrated guard ring for stress protection.

Two separate dies encapsulated in a SOT666 ultra small SMD plastic package.

### PINNING

PIN	DESCRIPTION
1	anode 1
2	not connected
3	cathode 2
4	anode 2
5	not connected
6	cathode 1



### LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
<b>Per diode</b>					
$V_R$	continuous reverse voltage		–	70	V
$I_F$	continuous forward current		–	70	mA
$I_{FRM}$	repetitive peak forward current	$t_p \leq 1 \text{ s}; \delta \leq 0.5$	–	70	mA
$I_{FSM}$	non-repetitive peak forward current	$t_p < 10 \text{ ms}$	–	100	mA
$T_{stg}$	storage temperature		–65	+150	°C
$T_j$	junction temperature		–	150	°C
$T_{amb}$	operating ambient temperature		–65	+150	°C

## Schottky barrier double diode

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**CHARACTERISTICS** $T_{amb} = 25\text{ °C}$  unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
$V_F$	forward voltage	see Fig.2		
		$I_F = 1\text{ mA}$	410	mV
		$I_F = 10\text{ mA}$	750	mV
		$I_F = 15\text{ mA}$	1	V
$I_R$	reverse current	$V_R = 50\text{ V}$ ; note 1; see Fig.3	100	nA
		$V_R = 70\text{ V}$ ; note 1; see Fig.3	10	$\mu\text{A}$
$C_d$	diode capacitance	$V_R = 0$ ; $f = 1\text{ MHz}$ ; see Fig.5	2	pF

**Note**

1. Pulse 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	416	K/W

**Note**

1. Refer to SOT666 standard mounting conditions.

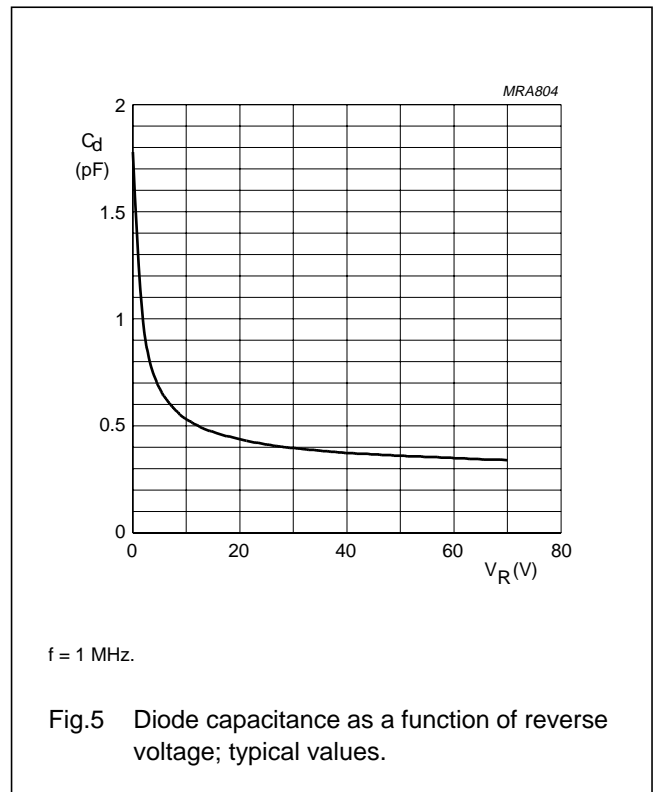
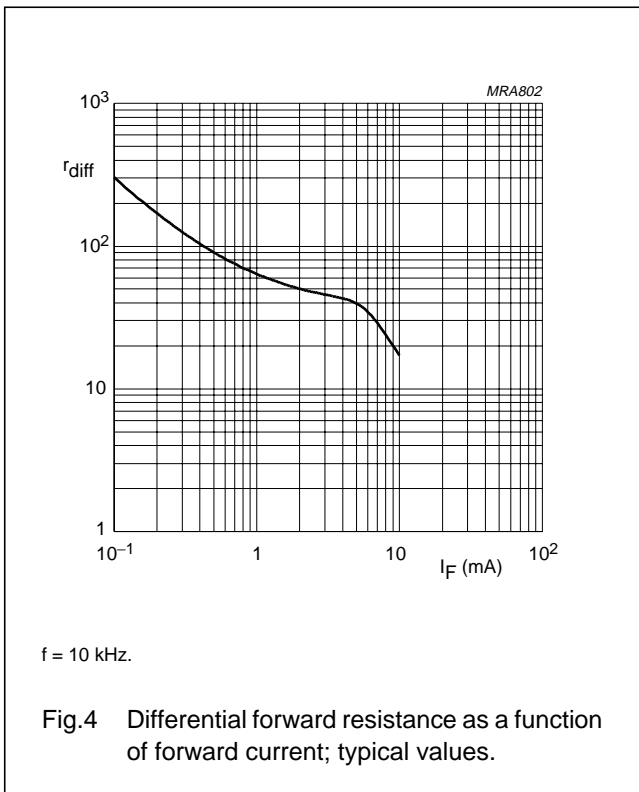
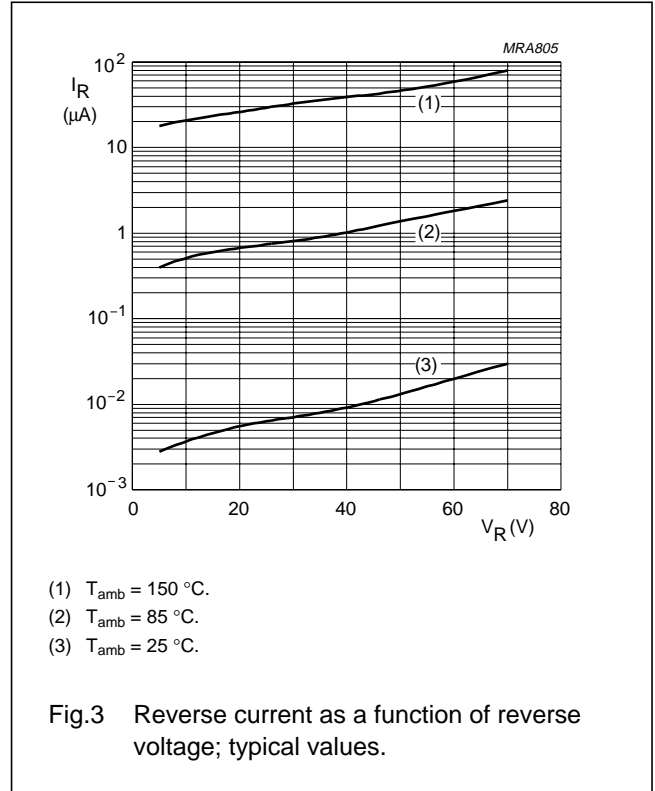
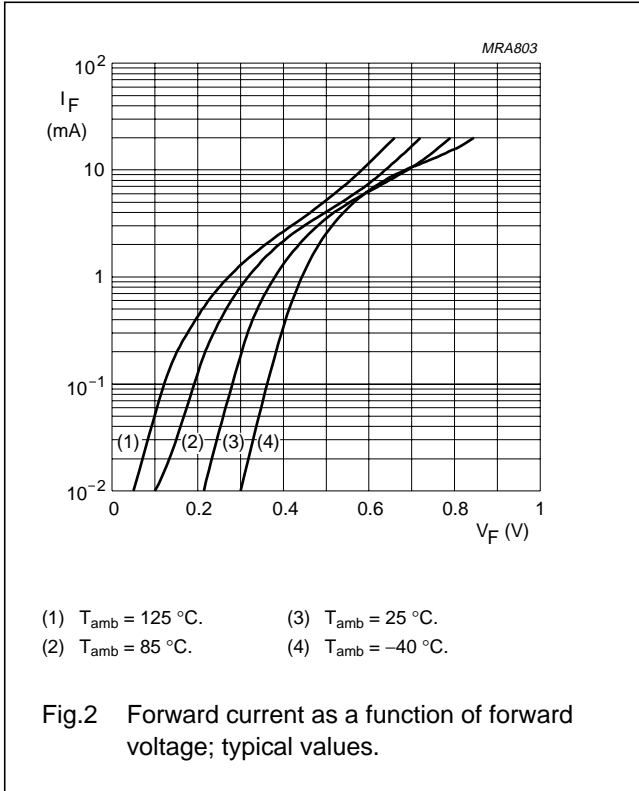
**Soldering**

The only recommended soldering is reflow soldering.

Schottky barrier double diode

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GRAPHICAL DATA



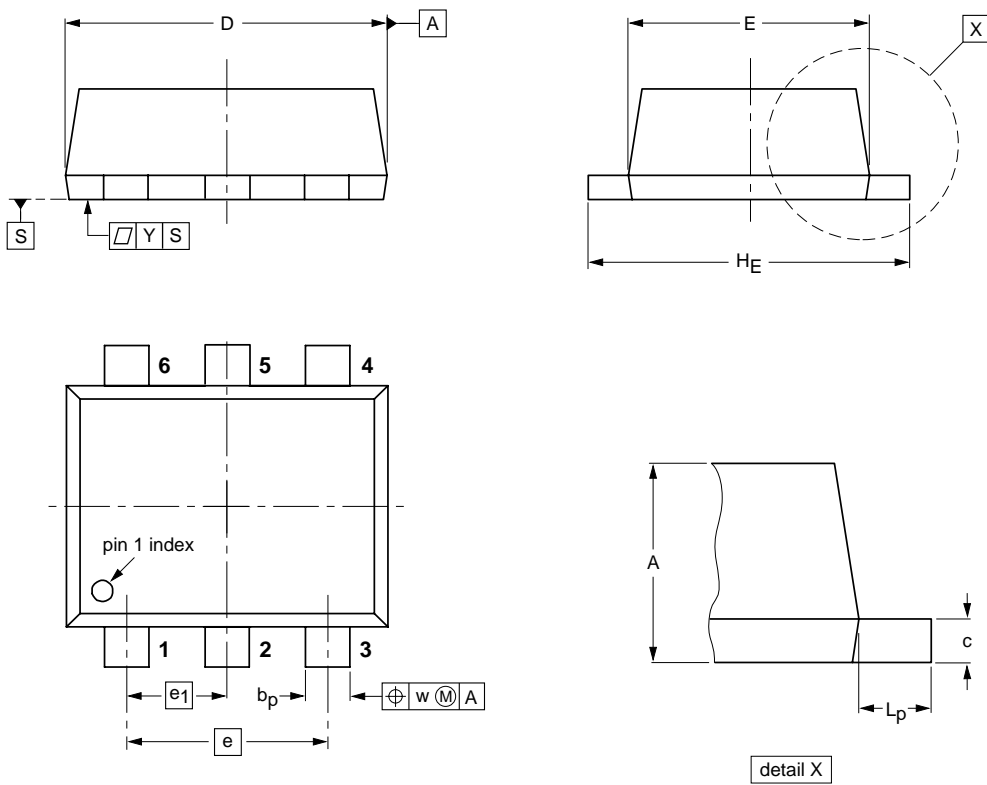
Schottky barrier double diode

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PACKAGE OUTLINE

Plastic surface mounted package; 6 leads

SOT666



DIMENSIONS (mm are the original dimensions)

UNIT	A	$b_p$	c	D	E	e	$e_1$	$H_E$	$L_p$	w	y
mm	0.6 0.5	0.27 0.17	0.18 0.08	1.7 1.5	1.3 1.1	1.0	0.5	1.7 1.5	0.3 0.1	0.1	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT666						01-01-04 01-08-27

## Schottky barrier double diode

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## DATA SHEET STATUS

DATA SHEET STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)</sup>	DEFINITIONS
Objective data	Development	This data sheet contains data from the objective specification for product development. Philips Semiconductors reserves the right to change the specification in any manner without notice.
Preliminary data	Qualification	This data sheet contains data from the preliminary specification. Supplementary data will be published at a later date. Philips Semiconductors reserves the right to change the specification without notice, in order to improve the design and supply the best possible product.
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Schottky barrier double diode

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