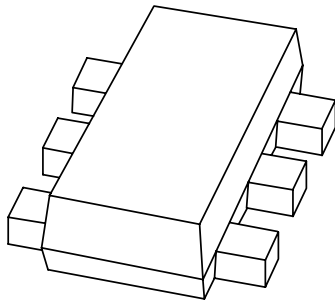


# DATA SHEET



## **BAT74V** Schottky barrier double diode

Product specification

2002 Sep 02

# Schottky barrier double diode

# BAT74V

### FEATURES

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

### APPLICATIONS

- Ultra high-speed switching
- Voltage clamping
- Line termination
- Inverse polarity protection.

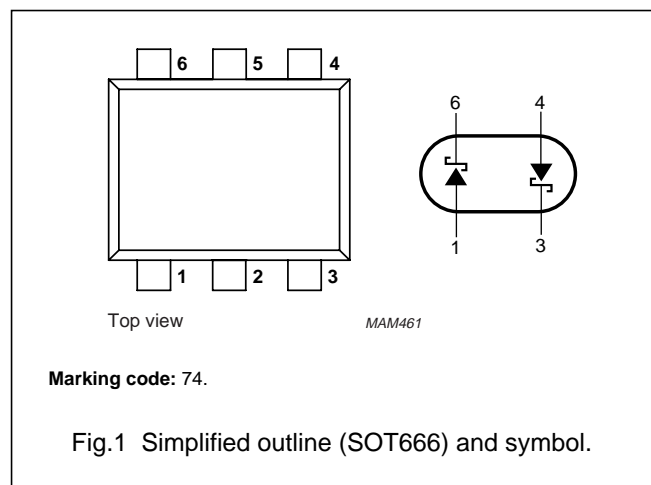
### DESCRIPTION

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
$V_R$	continuous reverse voltage		–	30	V
$I_F$	continuous forward current		–	200	mA
$I_{FRM}$	repetitive peak forward current	$t_p \leq 1 \text{ s}; \delta \leq 0.5$	–	300	mA
$I_{FSM}$	non-repetitive peak forward current	$t_p < 10 \text{ ms}$		600	mA
$P_{tot}$	total power dissipation	$T_{amb} \leq 25 \text{ °C}$	–	230	mW
$T_{stg}$	storage temperature		–65	+150	°C
$T_j$	junction temperature		–	125	°C
$T_{amb}$	operating ambient temperature		–65	+125	°C

## Schottky barrier double diode

BAT74V

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

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
$V_F$	continuous forward voltage	$I_F = 0.1\text{ mA}$	240	mV
		$I_F = 1\text{ mA}$	320	mV
		$I_F = 10\text{ mA}$	400	mV
		$I_F = 30\text{ mA}$	500	mV
		$I_F = 100\text{ mA}$ ; note 1; see Fig.2	800	mV
$I_R$	reverse current	$V_R = 25\text{ V}$ ; note 1; see Fig.3	2	$\mu\text{A}$
$C_d$	diode capacitance	$V_R = 1\text{ V}$ ; $f = 1\text{ MHz}$ ; see Fig.4	10	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.

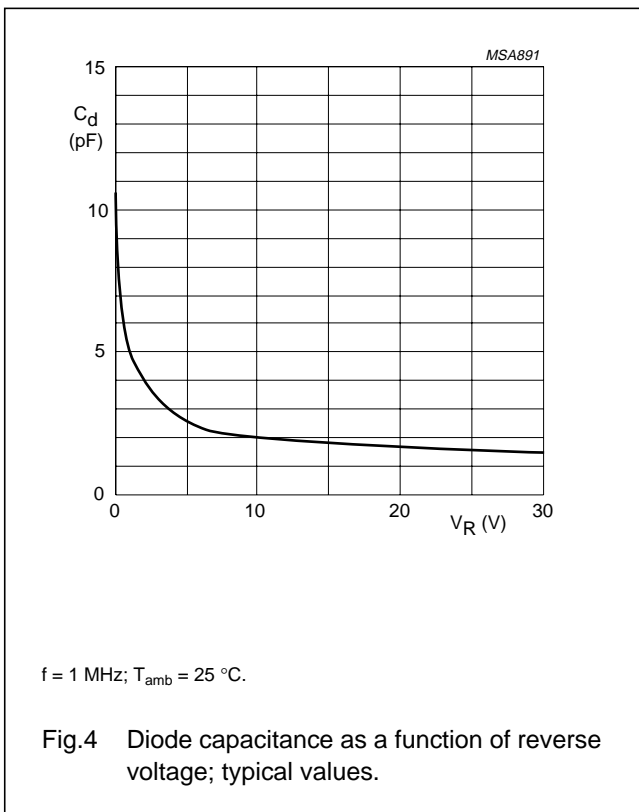
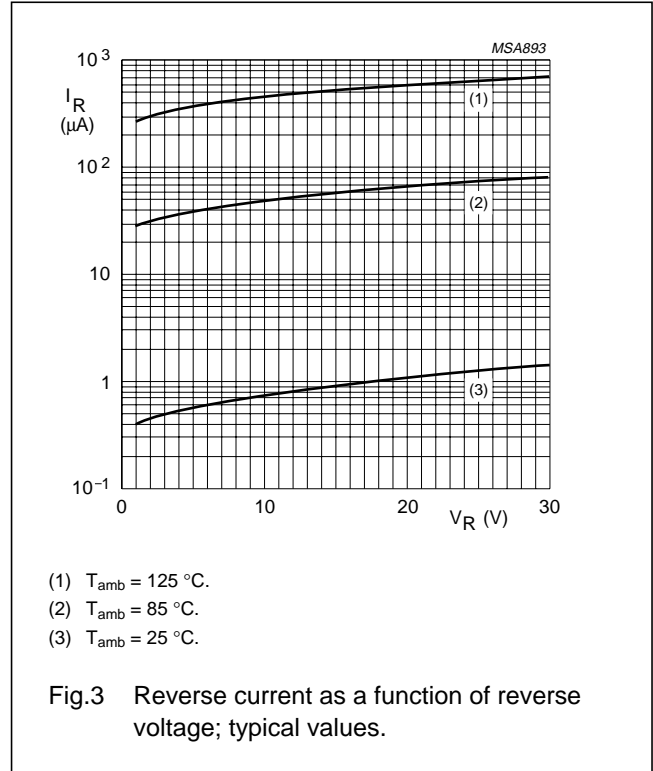
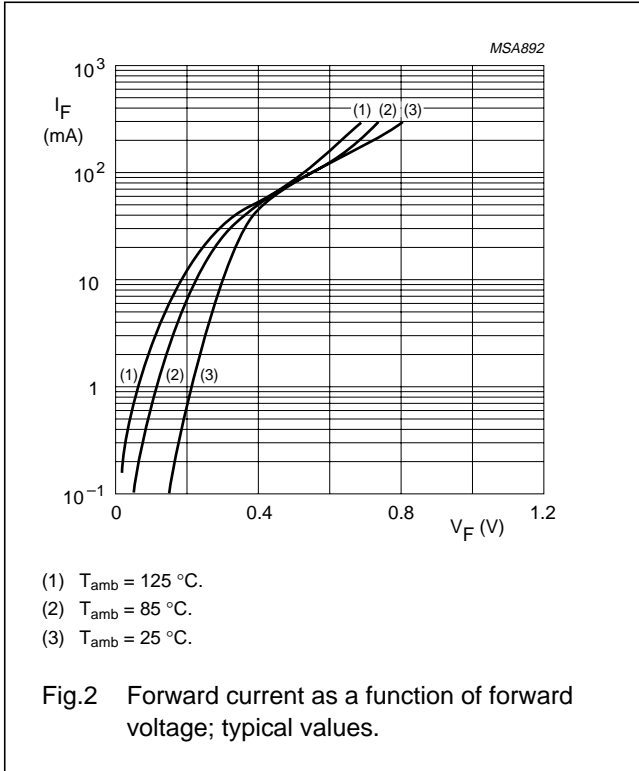
**Soldering**

The only recommended soldering method is reflow soldering.

Schottky barrier double diode

BAT74V

GRAPHICAL DATA



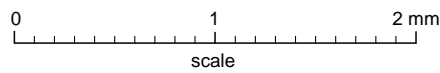
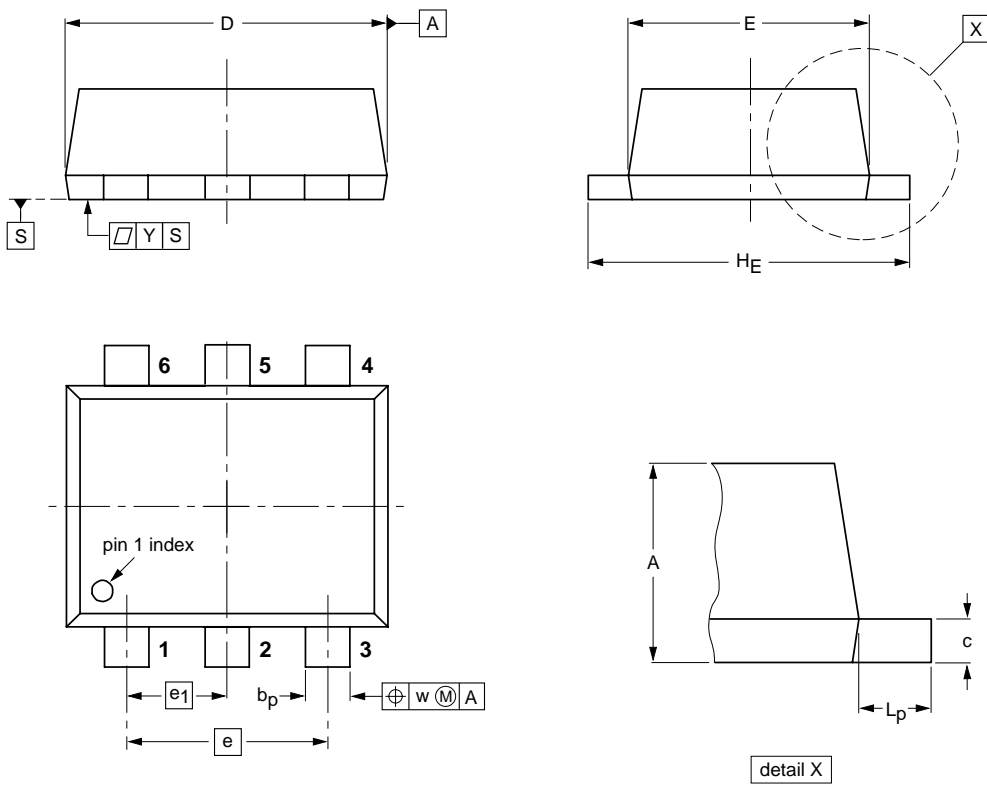
# Schottky barrier double diode

BAT74V

## 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

BAT74V

## DATA SHEET STATUS

DATA SHEET STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)</sup>	DEFINITIONS
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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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