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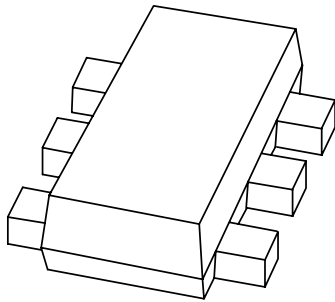
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If you have any questions related to the data sheet, please contact our nearest sales office via e-mail or telephone (details via **[salesaddresses@nexperia.com](mailto:salesaddresses@nexperia.com)**). Thank you for your cooperation and understanding,

Kind regards,

Team Nexperia

# DATA SHEET



**BAT74V**

Schottky barrier double diode

Product data sheet

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.

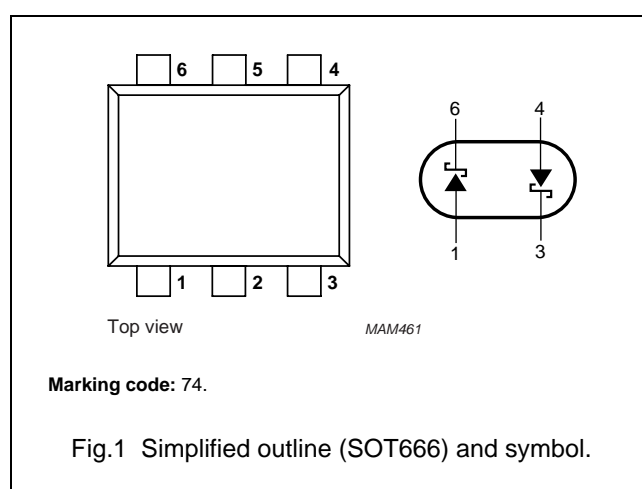
## DESCRIPTION

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	$T_{amb} \leq 25 \text{ }^\circ\text{C}$	–	230	mW
$T_{stg}$	storage temperature		–65	+150	$^\circ\text{C}$
$T_j$	junction temperature		–	125	$^\circ\text{C}$
$T_{amb}$	operating ambient temperature		–65	+125	$^\circ\text{C}$

## Schottky barrier double diode

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**CHARACTERISTICS** $T_{\text{amb}} = 25\text{ }^{\circ}\text{C}$  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
$R_{\text{th j-a}}$	thermal resistance from junction to ambient	note 1	416	K/W

**Note**

1. Refer to SOT666 standard mounting conditions.

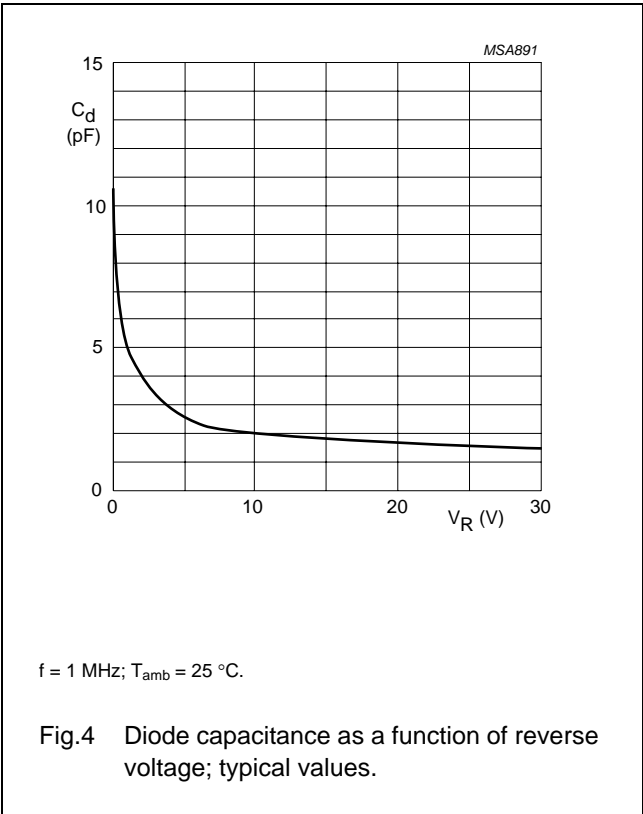
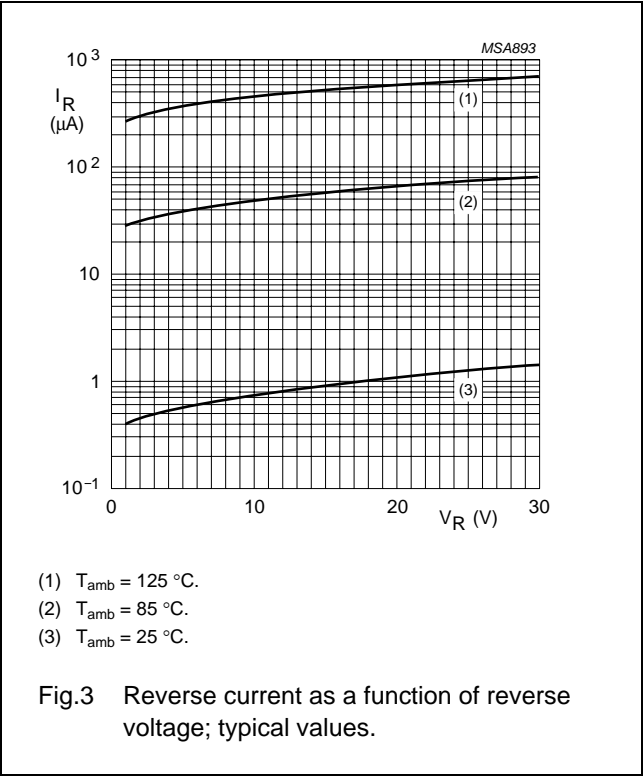
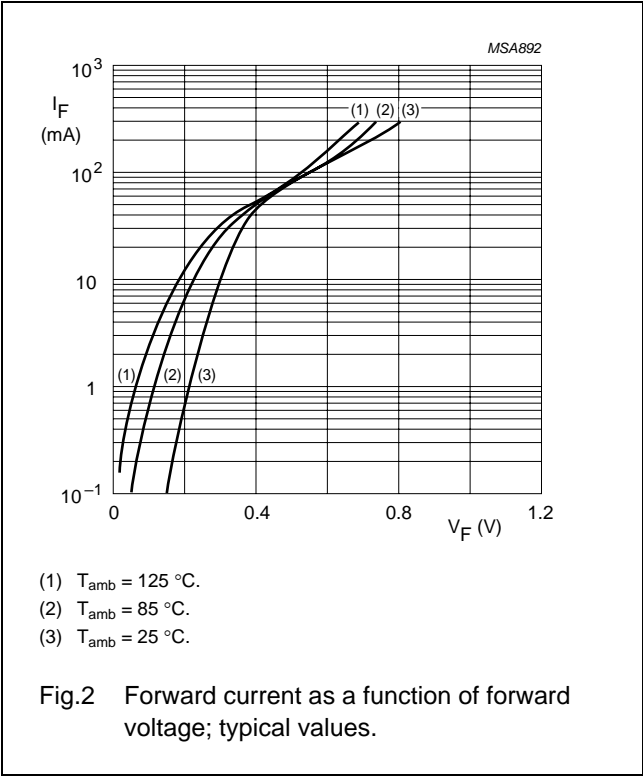
**Soldering**

The only recommended soldering method is reflow soldering.

Schottky barrier double diode

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GRAPHICAL DATA



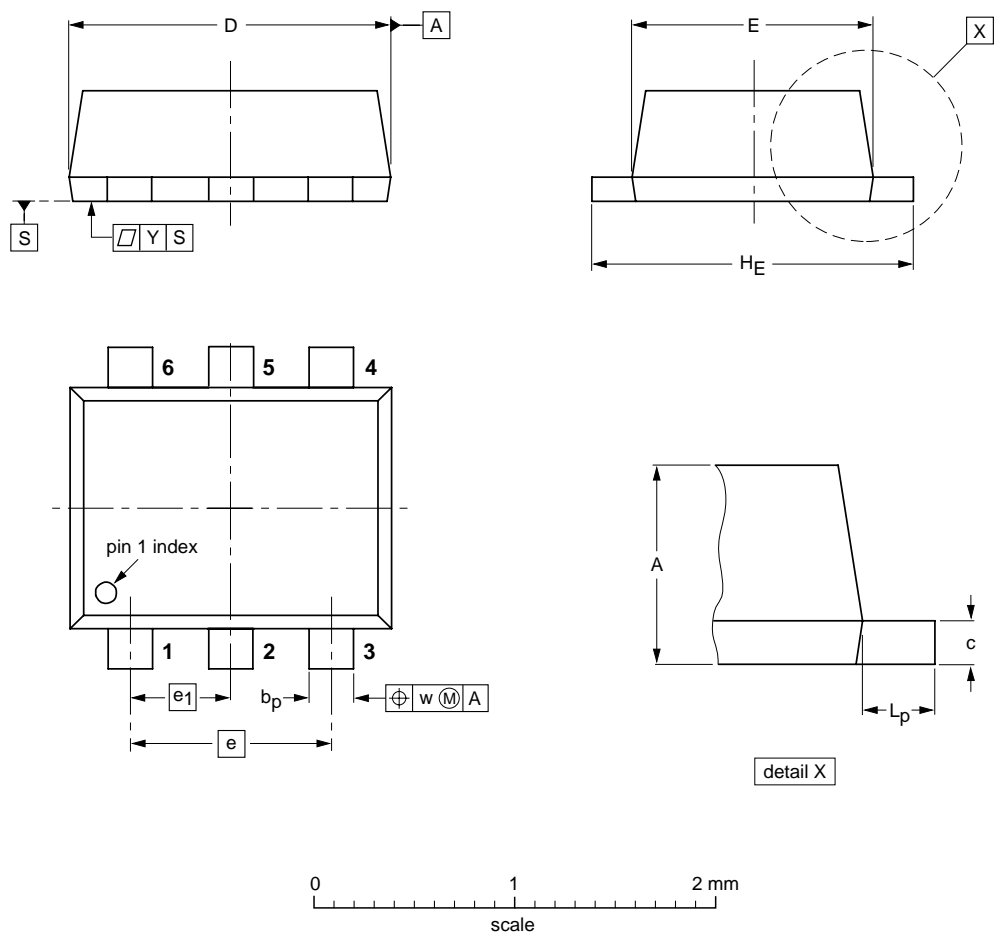
Schottky barrier double diode

BAT74V

PACKAGE OUTLINE


Plastic surface mounted package; 6 leads

SOT666



DIMENSIONS (mm are the original dimensions)

UNIT	A	b <sub>p</sub>	c	D	E	e	e <sub>1</sub>	H <sub>E</sub>	L <sub>p</sub>	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

DOCUMENT STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)</sup>	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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# ***NXP Semiconductors***

## **Customer notification**

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## **Contact information**

For additional information please visit: **<http://www.nxp.com>**

For sales offices addresses send e-mail to: **[salesaddresses@nxp.com](mailto:salesaddresses@nxp.com)**

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