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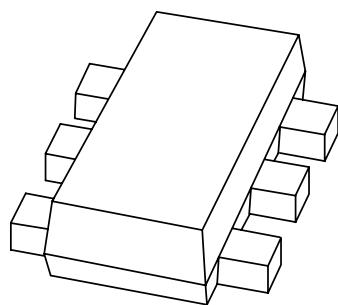
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Kind regards,

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.

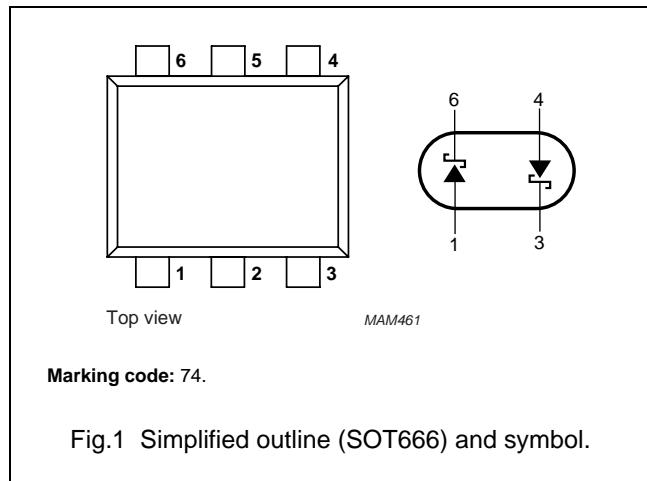
DESCRIPTION

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 $T_{amb} = 25 \text{ } ^\circ\text{C}$ 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	μA
C_d	diode capacitance	$V_R = 1 \text{ V}$; $f = 1 \text{ MHz}$; see Fig.4	10	pF

Note

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

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

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GRAPHICAL DATA

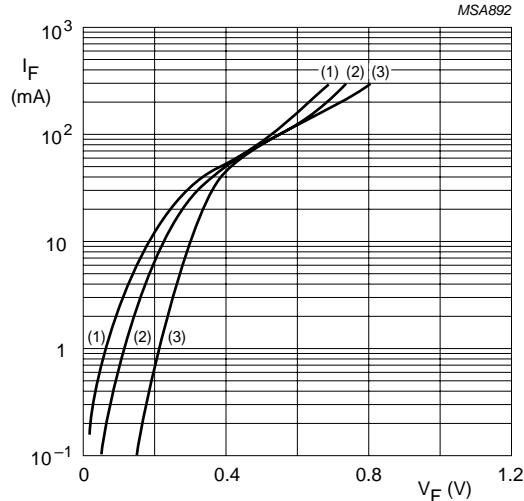


Fig.2 Forward current as a function of forward voltage; typical values.

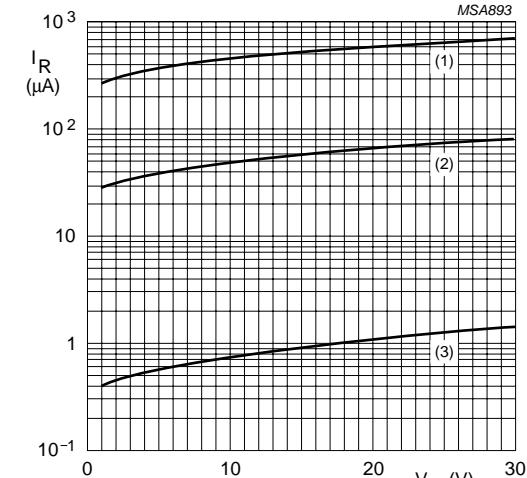
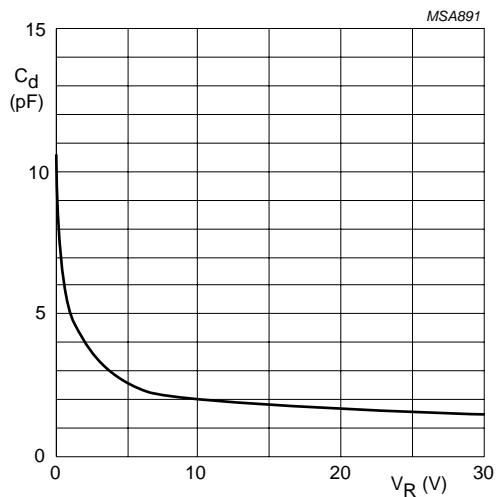


Fig.3 Reverse current as a function of reverse voltage; typical values.



$f = 1$ MHz; $T_{amb} = 25$ °C.

Fig.4 Diode capacitance as a function of reverse voltage; typical values.

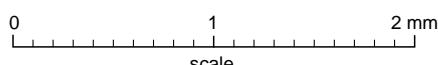
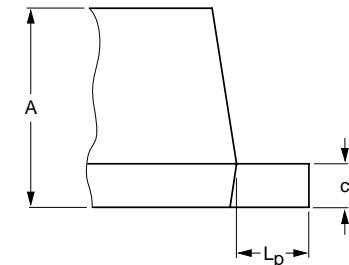
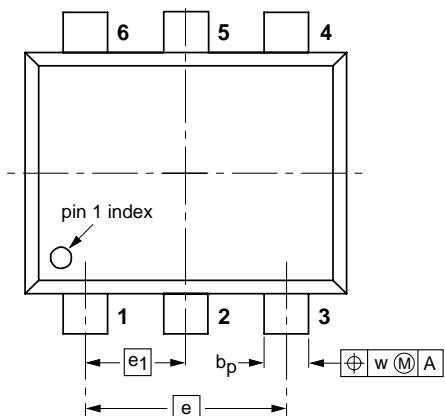
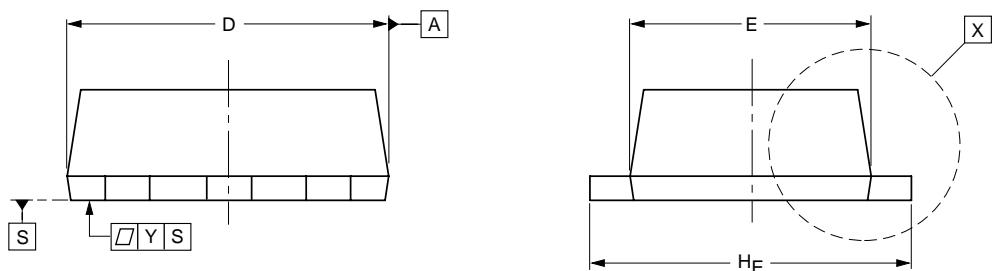
Schottky barrier double diode

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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	0.27	0.18	1.7	1.3	1.0	0.5	1.7	0.3	0.1	0.1
	0.5	0.17	0.08	1.5	1.1			1.5	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 ⁽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.

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NXP Semiconductors

Customer notification

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Contact information

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Printed in The Netherlands

613514/01/pp7

Date of release: 2002 Sep 02

Document order number: 9397 750 10101

Founded by

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