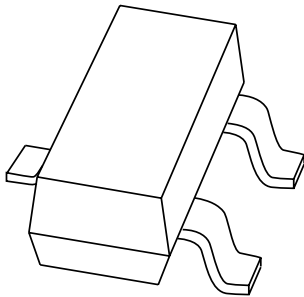


DATA SHEET



BAT721 series **Schottky barrier (double) diodes**

Product specification
Supersedes data of 1999 May 06

2001 Oct 12

Schottky barrier (double) diodes

BAT721 series

FEATURES

- Ultra high switching speed
- Low forward voltage
- Guard ring protected
- Small plastic SMD package.

APPLICATIONS

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

DESCRIPTION

Planar Schottky barrier diodes encapsulated in a SOT23 small plastic SMD package. Single diodes and double diodes with different pinning are available.

MARKING

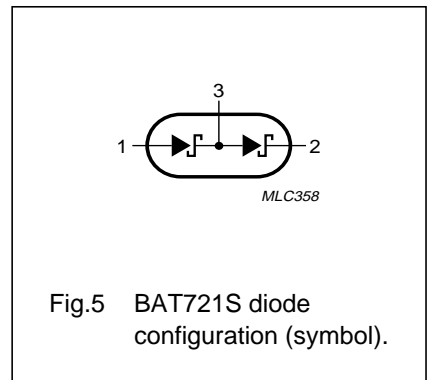
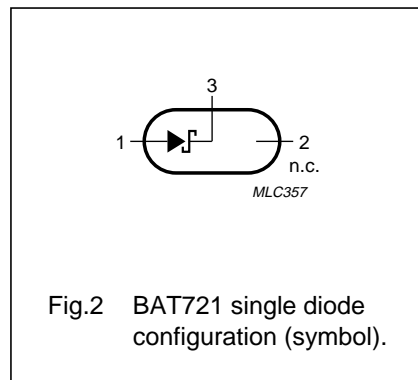
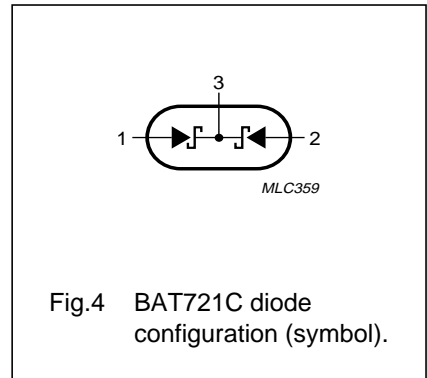
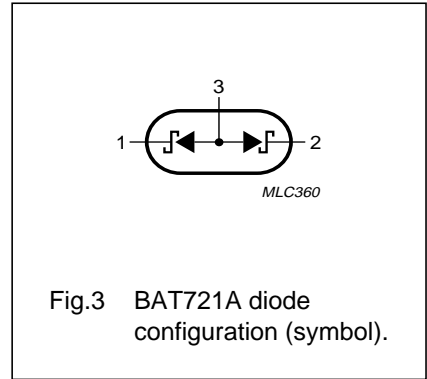
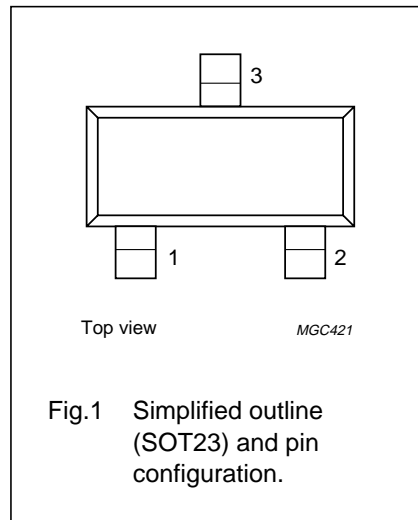
TYPE NUMBER	MARKING CODE ⁽¹⁾
BAT721	L7*
BAT721A	L8*
BAT721C	L9*
BAT721S	L0*

Note

- * = p : Made in Hong Kong.
 * = t : Made in Malaysia.
 * = W: Made in China.

PINNING

PIN	BAT721			
		A	C	S
1	a	k ₁	a ₁	a ₁
2	n.c.	k ₂	a ₂	k ₂
3	k	a ₁ , a ₂	k ₁ , k ₂	k ₁ , a ₂



Schottky barrier (double) diodes

BAT721 series

LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_R	continuous reverse voltage		–	40	V
I_F	continuous forward current		–	200	mA
I_{FSM}	non-repetitive peak forward current	$t_p = 8.3$ ms half sinewave; JEDEC method	–	1	A
T_{stg}	storage temperature		–65	+150	°C
T_j	junction temperature		–	125	°C

ELECTRICAL CHARACTERISTICS

$T_j = 25$ °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_F	continuous forward voltage	see Fig.6 $I_F = 10$ mA $I_F = 100$ mA $I_F = 200$ mA	–	300 420 550	mV mV mV
I_R	continuous reverse current	$V_R = 30$ V; see Fig.7 $V_R = 30$ V; $T_j = 100$ °C; see Fig.7	–	15 3	μ A mA
C_d	diode capacitance	$f = 1$ MHz; $V_R = 0$; see Fig.8	40	50	pF

Note

1. Pulse test: $t_p \leq 300$ μ s; $\delta \leq 0.02$.

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	500	K/W

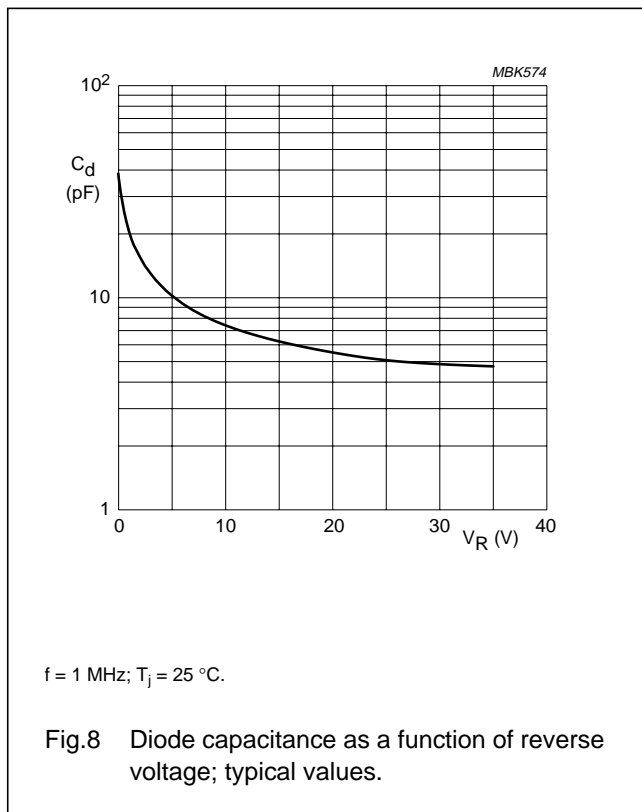
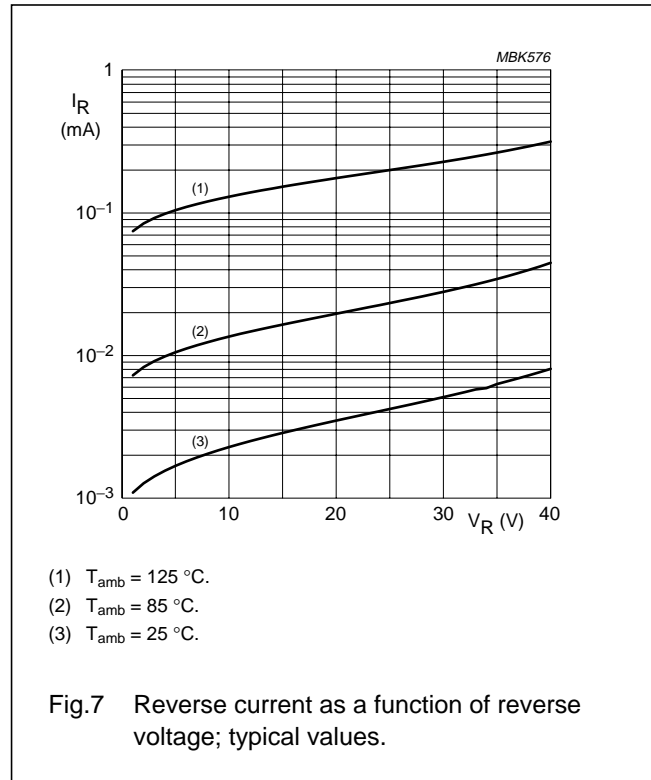
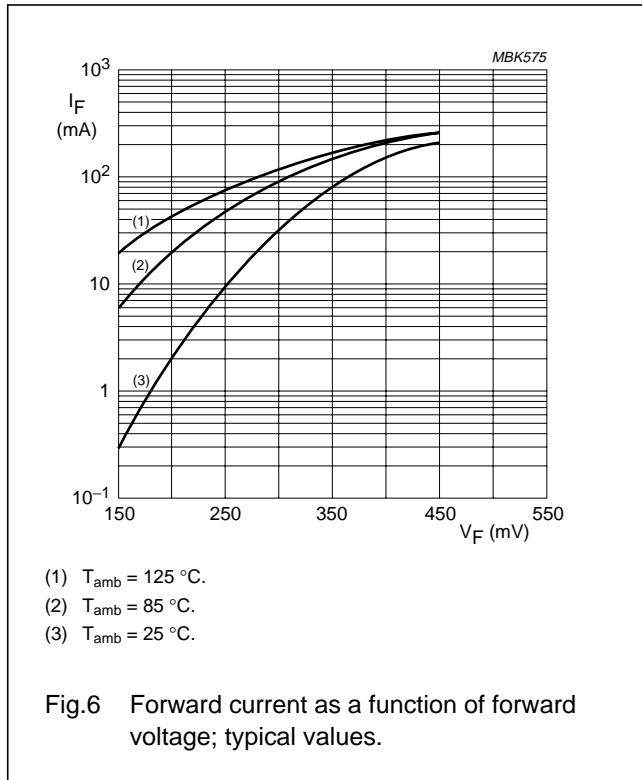
Note

1. Refer to SOT23 standard mounting conditions.

Schottky barrier (double) diodes

BAT721 series

GRAPHICAL DATA



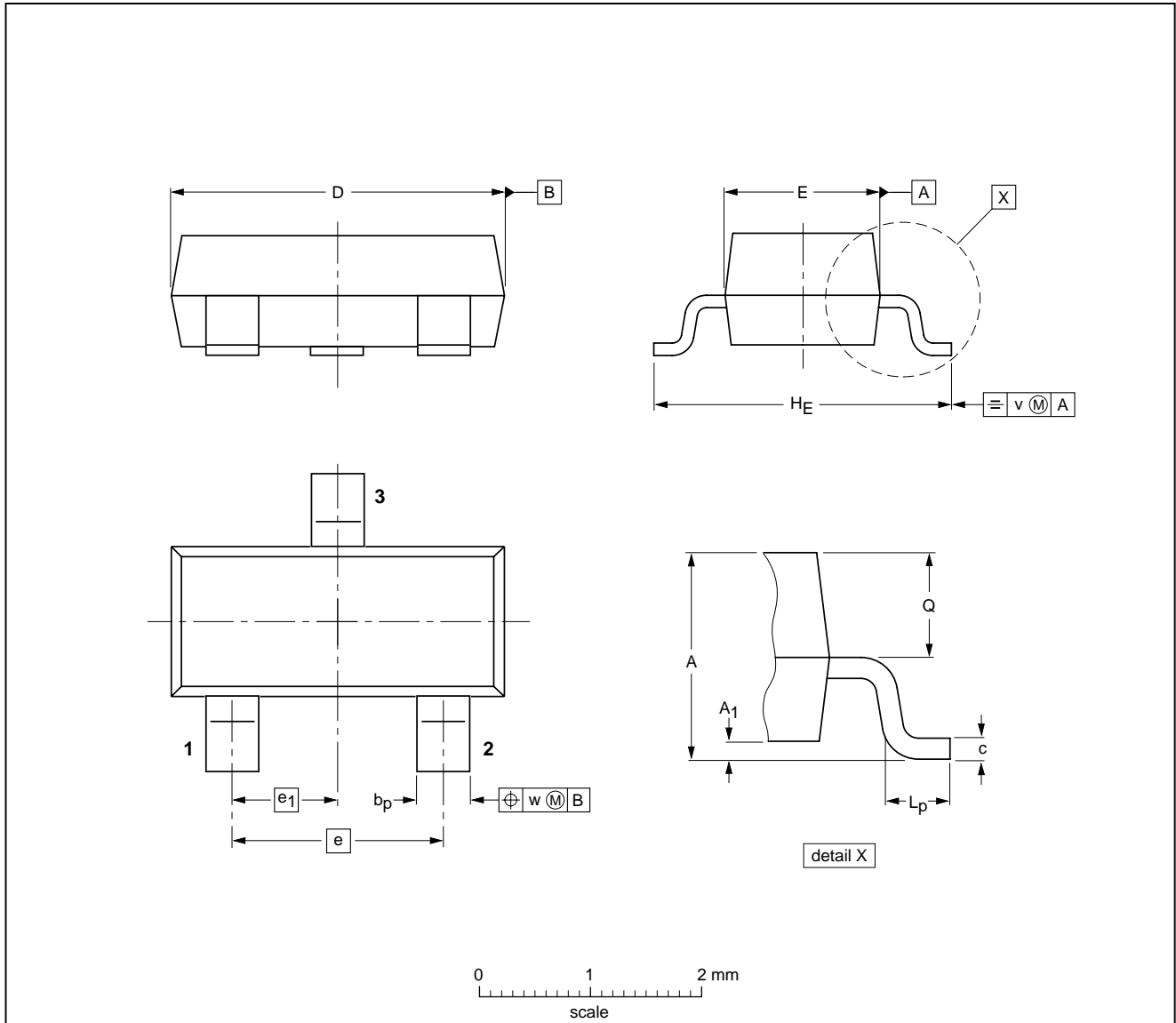
Schottky barrier (double) diodes

BAT721 series

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max.	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

OUTLINE VERSION	REFERENCES			EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ		
SOT23		TO-236AB			97-02-28 99-09-13

Schottky barrier (double) diodes

BAT721 series

DATA SHEET STATUS

DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	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.
Product data	Production	This data sheet contains data from the product specification. Philips Semiconductors reserves the right to make changes at any time in order to improve the design, manufacturing and supply. Changes will be communicated according to the Customer Product/Process Change Notification (CPCN) procedure SNW-SQ-650A.

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2. The product status of the device(s) described in this data sheet may have changed since this data sheet was published. The latest information is available on the Internet at URL <http://www.semiconductors.philips.com>.

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Schottky barrier (double) diodes

BAT721 series

NOTES

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