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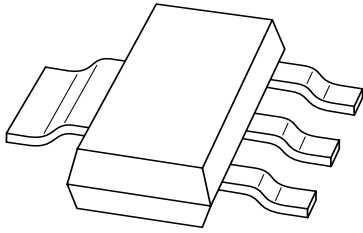
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If you have any questions related to the data sheet, please contact our nearest sales office via e-mail or telephone (details via [salesaddresses@nexperia.com](mailto:salesaddresses@nexperia.com)). Thank you for your cooperation and understanding,

Kind regards,

Team Nexperia

# DATA SHEET



## **BAT160 series** Schottky barrier double diodes

Product data sheet  
Supersedes data of 1999 Mar 26

1999 Sep 20

# Schottky barrier double diodes

# BAT160 series

### FEATURES

- Low switching losses
- Capability of absorbing very high surge current
- Fast recovery time
- Guard ring protected
- Plastic SMD package.

### APPLICATIONS

- Low power switched-mode power supplies
- Rectification
- Polarity protection.

### DESCRIPTION

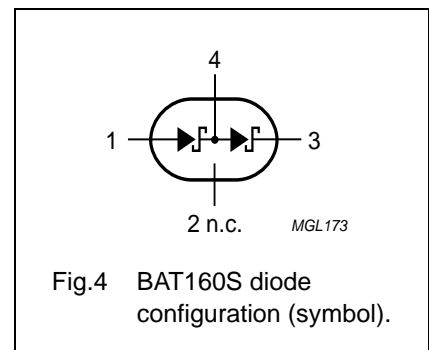
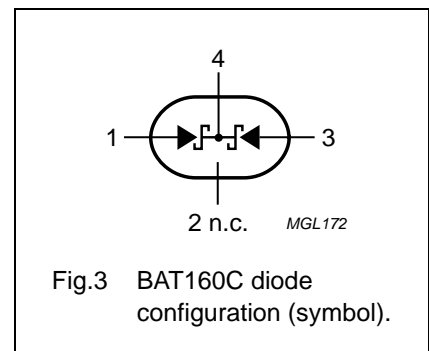
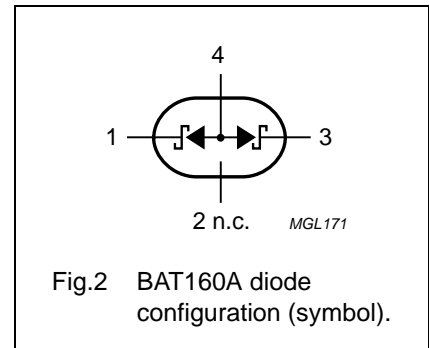
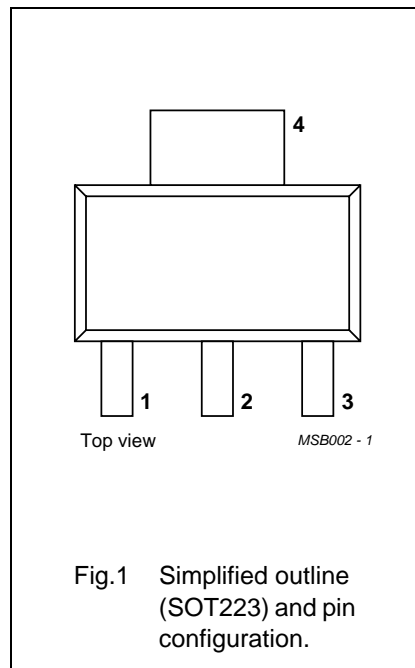
Planar Schottky barrier double diodes encapsulated in a SOT223 plastic SMD package.

### MARKING

TYPE NUMBER	MARKING CODE
BAT160A	AT160A
BAT160C	AT160C
BAT160S	AT160S

### PINNING

PIN	BAT160		
	A	C	S
1	k <sub>1</sub>	a <sub>1</sub>	a <sub>1</sub>
2	n.c.	n.c.	n.c.
3	k <sub>2</sub>	a <sub>2</sub>	k <sub>2</sub>
4	a <sub>1</sub> , a <sub>2</sub>	k <sub>1</sub> , k <sub>2</sub>	k <sub>1</sub> , a <sub>2</sub>



## Schottky barrier double diodes

## BAT160 series

**LIMITING VALUES**

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
<b>Per diode</b>					
$V_R$	continuous reverse voltage		–	60	V
$I_F$	continuous forward current		–	1	A
$I_{FSM}$	non-repetitive peak forward current	$t_p = 8.3$ ms; half sinewave; JEDEC method	–	10	A
$I_{RSM}$	non-repetitive peak reverse current	$t_p = 100$ $\mu$ s	–	0.5	A
$T_{stg}$	storage temperature		–65	+150	$^{\circ}$ C
$T_j$	junction temperature		–	150	$^{\circ}$ C

**ELECTRICAL CHARACTERISTICS**

$T_{amb} = 25$   $^{\circ}$ C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
<b>Per diode</b>				
$V_F$	forward voltage	see Fig.5 $I_F = 100$ mA $I_F = 1$ A $I_F = 2$ A	400 650 850	mV mV mV
$I_R$	reverse current	$V_R = 60$ V; note 1; see Fig.6	350	$\mu$ A
		$V_R = 60$ V; $T_j = 100$ $^{\circ}$ C; note 1; see Fig.6	8	mA
$C_d$	diode capacitance	$f = 1$ MHz; $V_R = 4$ V; see Fig 7	60	pF

**Note**

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

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	100	K/W

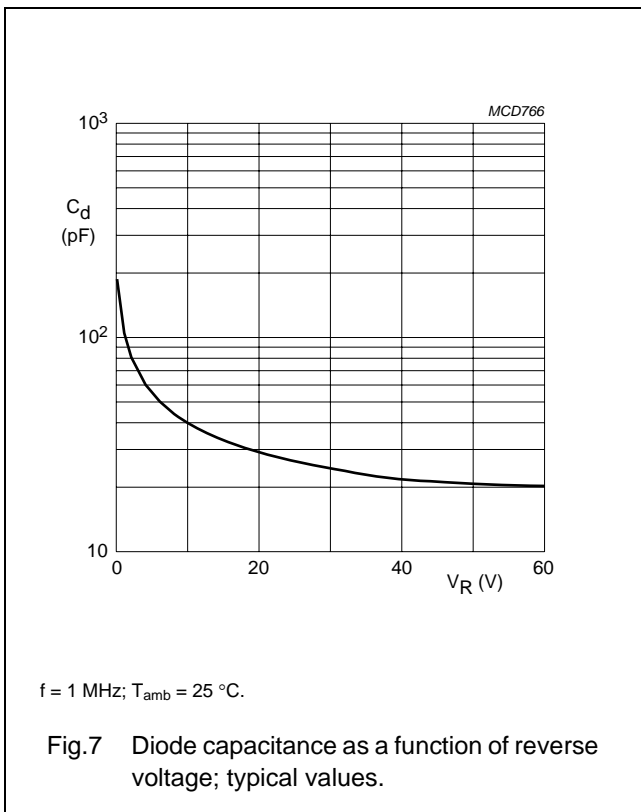
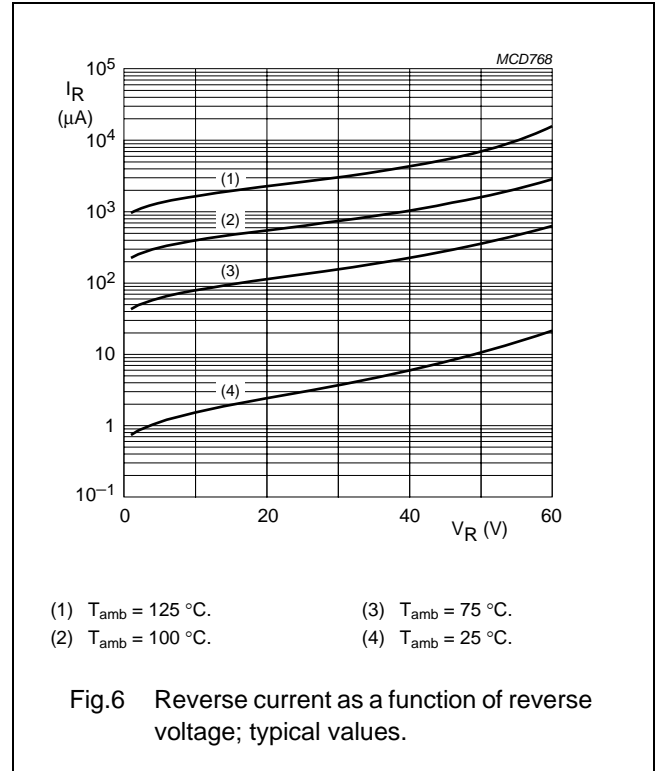
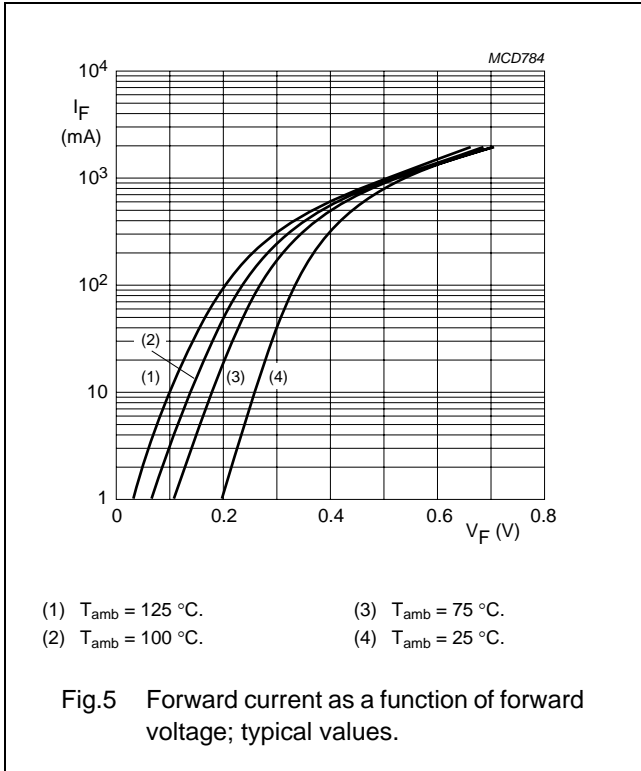
**Note**

1. Refer to SOT223 standard mounting conditions.

Schottky barrier double diodes

BAT160 series

GRAPHICAL DATA



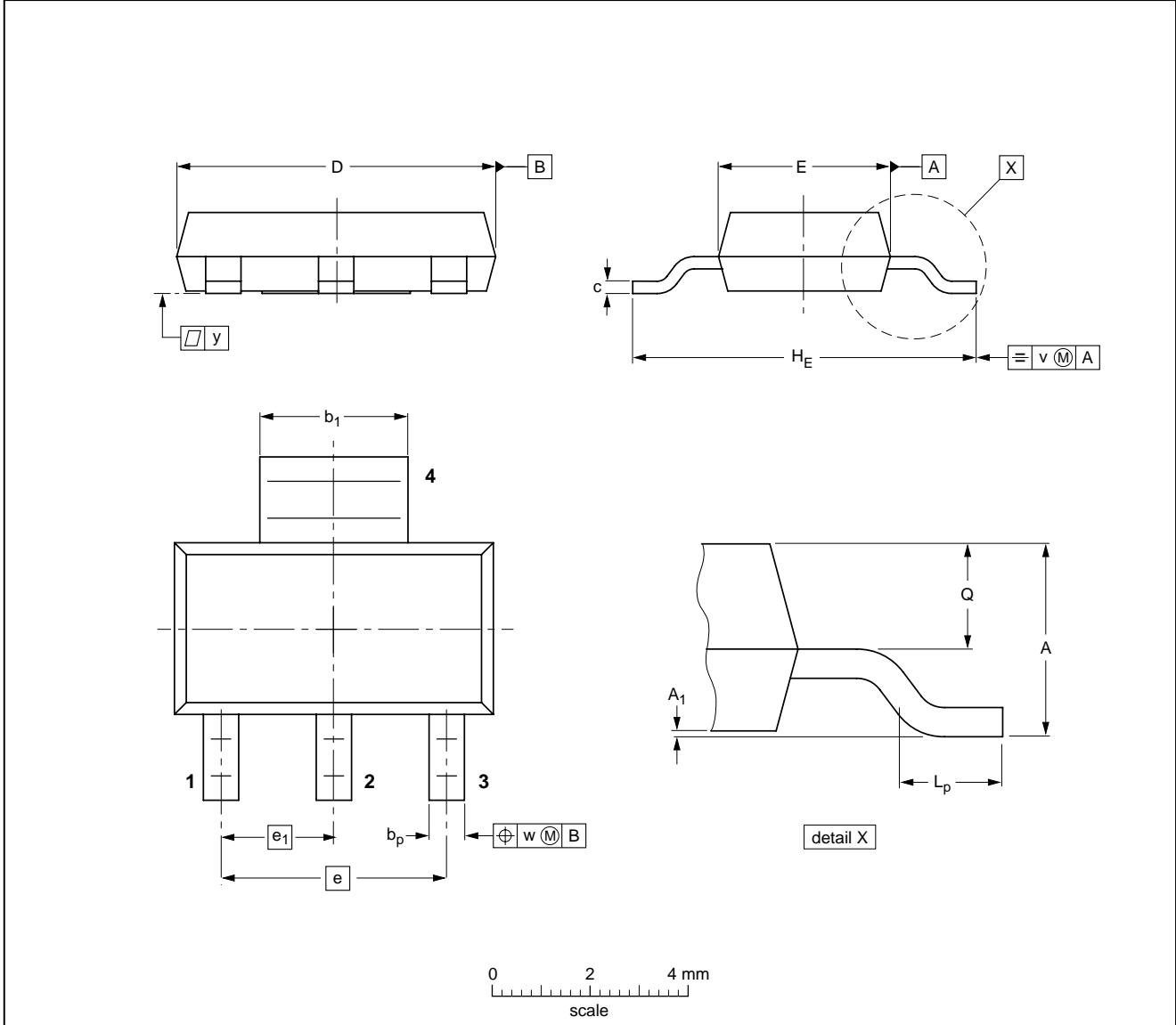
Schottky barrier double diodes

BAT160 series

PACKAGE OUTLINE

Plastic surface mounted package; collector pad for good heat transfer; 4 leads

SOT223



DIMENSIONS (mm are the original dimensions)

UNIT	A	A <sub>1</sub>	b <sub>p</sub>	b <sub>1</sub>	c	D	E	e	e <sub>1</sub>	H <sub>E</sub>	L <sub>p</sub>	Q	v	w	y
mm	1.8 1.5	0.10 0.01	0.80 0.60	3.1 2.9	0.32 0.22	6.7 6.3	3.7 3.3	4.6	2.3	7.3 6.7	1.1 0.7	0.95 0.85	0.2	0.1	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT223			SC-73			97-02-28 99-09-13

## Schottky barrier double diodes

## BAT160 series

## 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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