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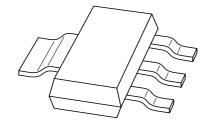
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Kind regards,

Team Nexperia

DISCRETE SEMICONDUCTORS

DATA SHEET



BAT160 seriesSchottky 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						
FIIN	Α	С	S				
1	k ₁	a ₁	a ₁				
2	n.c.	n.c.	n.c.				
3	k ₂	a ₂	k ₂				
4	a ₁ , a ₂	k ₁ , k ₂	k ₁ , a ₂				

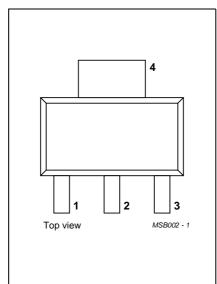


Fig.1 Simplified outline (SOT223) and pin configuration.

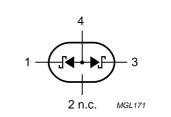
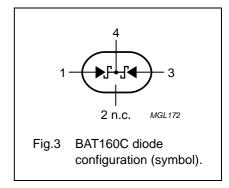


Fig.2 BAT160A diode configuration (symbol).



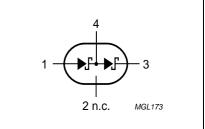


Fig.4 BAT160S diode configuration (symbol).

Schottky barrier double diodes

BAT160 series

LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
Per diode					
V_R	continuous reverse voltage		_	60	V
I _F	continuous forward current		_	1	Α
I _{FSM}	non-repetitive peak forward current	t _p = 8.3 ms; half sinewave; JEDEC method	_	10	А
I _{RSM}	non-repetitive peak reverse current	t _p = 100 μs	_	0.5	Α
T _{stg}	storage temperature		-65	+150	°C
Tj	junction temperature		_	150	°C

ELECTRICAL CHARACTERISTICS

 T_{amb} = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
Per diode		·	•	•
V _F	forward voltage	see Fig.5		
		I _F = 100 mA	400	mV
		I _F = 1 A	650	mV
		I _F = 2 A	850	mV
I _R	reverse current	V _R = 60 V; note 1; see Fig.6	350	μА
		$V_R = 60 \text{ V}; T_j = 100 ^{\circ}\text{C}; \text{ note 1};$ see Fig.6	8	mA
C _d	diode capacitance	$f = 1 \text{ MHz}$; $V_R = 4 \text{ V}$; see Fig 7	60	pF

Note

1. Pulse test: t_p = 300 μ s; δ = 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

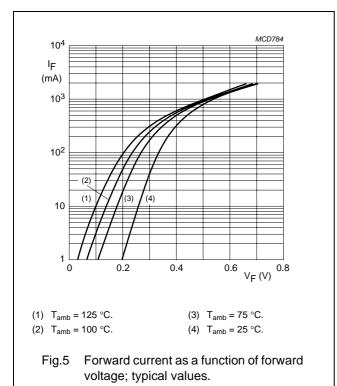
1. Refer to SOT223 standard mounting conditions.

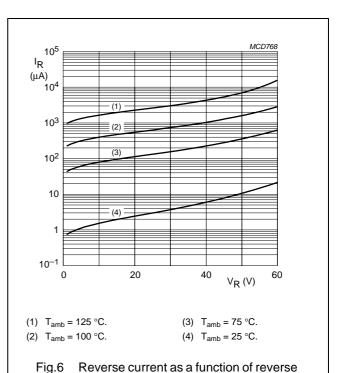
1999 Sep 20 3

Schottky barrier double diodes

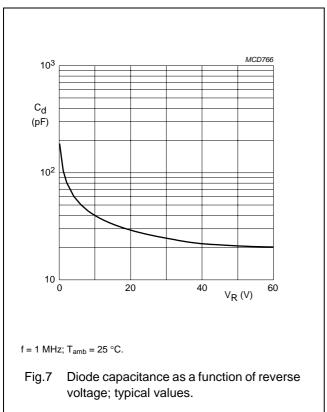
BAT160 series

GRAPHICAL DATA





voltage; typical values.



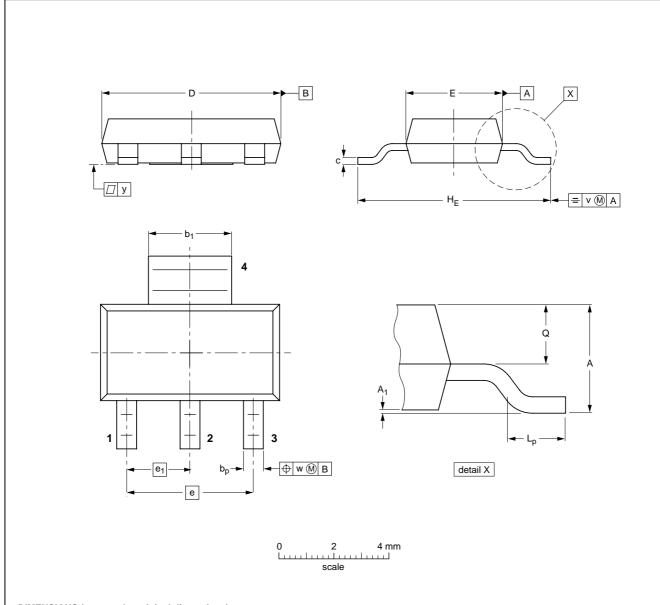
Schottky barrier double diodes

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 ₁	bp	b ₁	С	D	Е	е	e ₁	HE	Lp	Q	v	w	у
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		REFER	EUROPEAN	ISSUE DATE		
VERSION	IEC	JEDEC	EIAJ		PROJECTION	1330E DATE
SOT223			SC-73			-97-02-28 99-09-13

1999 Sep 20 5

Schottky barrier double diodes

BAT160 series

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.

Notes

- 1. Please consult the most recently issued document before initiating or completing a design.
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NXP Semiconductors

Customer notification

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Офис по работе с юридическими лицами:

105318, г. Москва, ул. Щербаковская д. 3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru moschip.ru_6 moschip.ru_4 moschip.ru_9