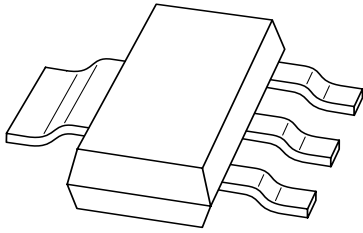


DATA SHEET



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 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

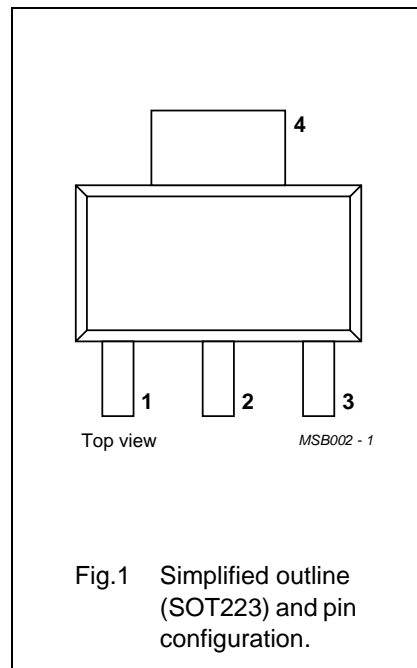


Fig.1 Simplified outline (SOT223) and pin configuration.

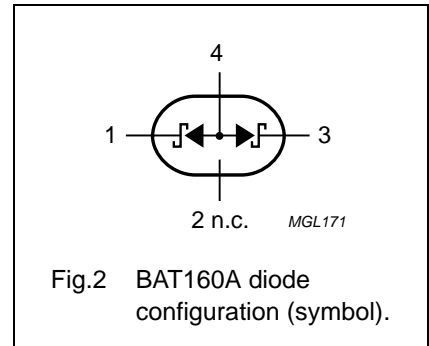


Fig.2 BAT160A diode configuration (symbol).

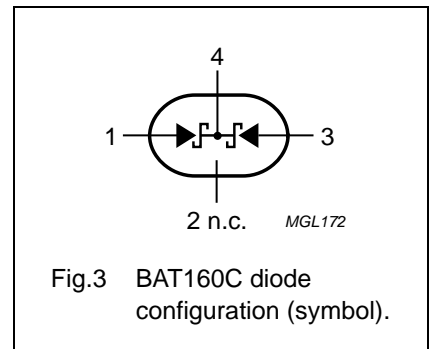


Fig.3 BAT160C diode configuration (symbol).

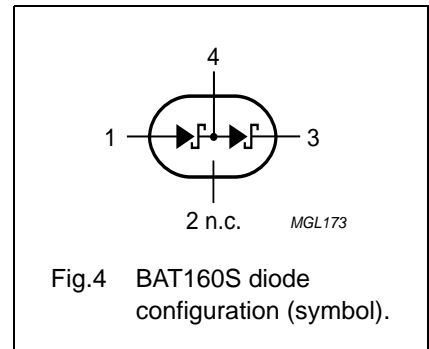


Fig.4 BAT160S diode configuration (symbol).

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	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	$t_p = 100$ μ 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
Per diode				
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	μ 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: $t_p = 300$ μ 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

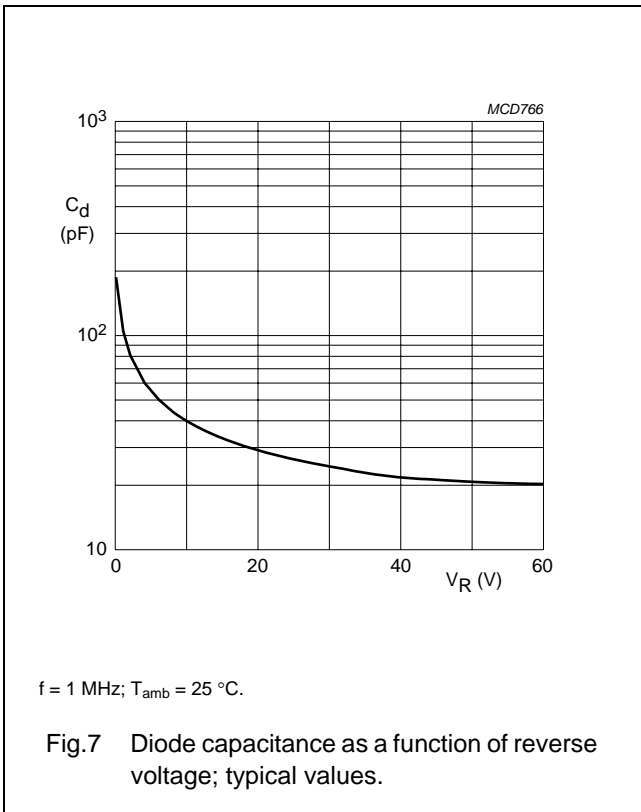
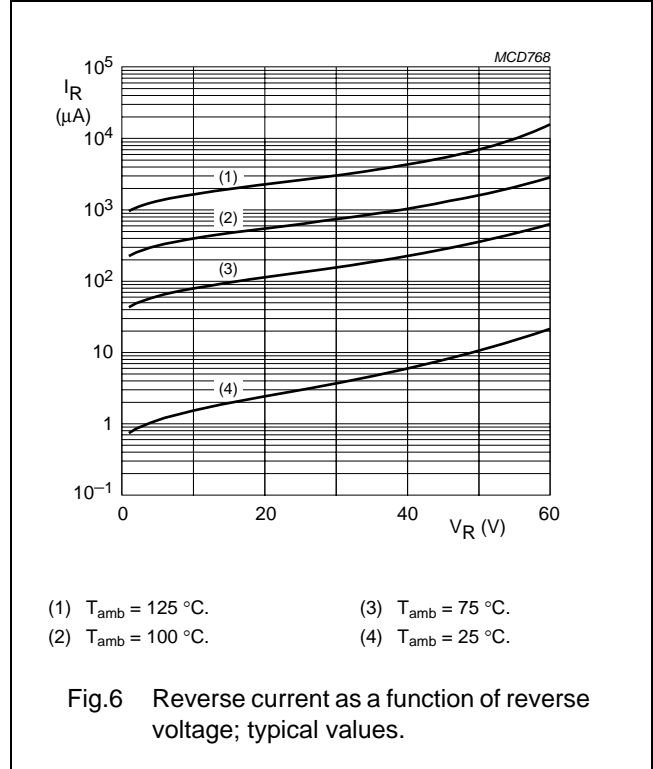
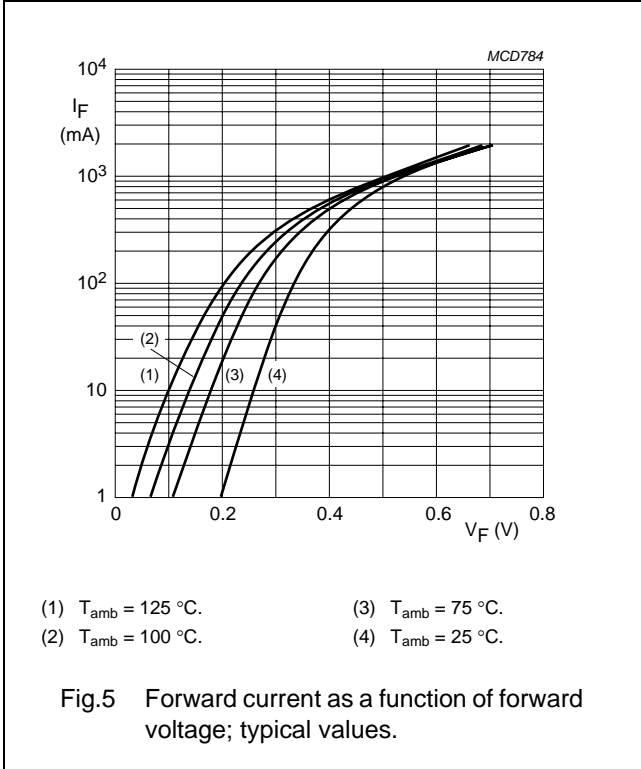
Note

1. Refer to SOT223 standard mounting conditions.

Schottky barrier double diodes

BAT160 series

GRAPHICAL DATA



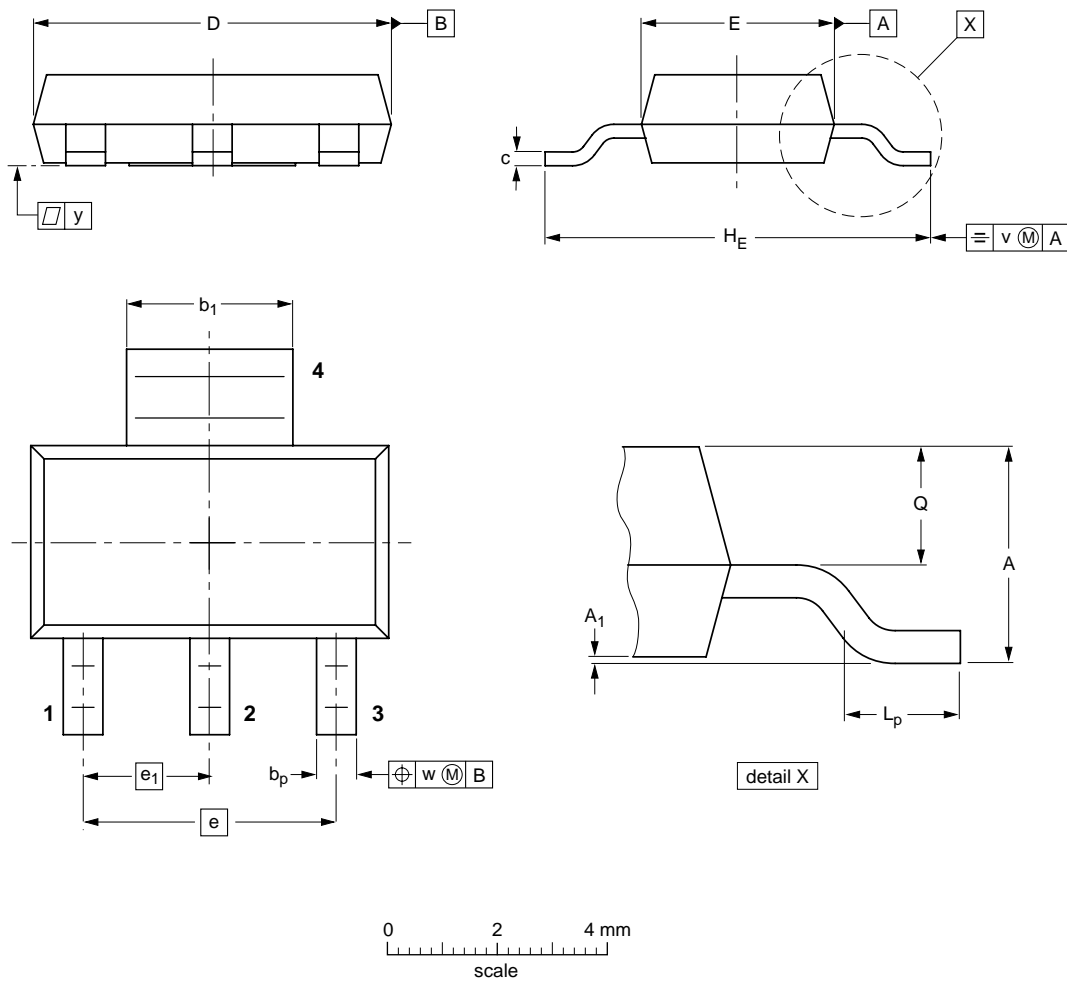
Schottky barrier double diodes

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 ₁	b _p	b ₁	c	D	E	e	e ₁	H _E	L _p	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 ⁽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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