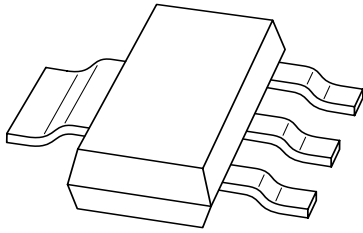


DATA SHEET



BAT120 Schottky barrier double diodes

Product specification
Supersedes data of 1998 Oct 30

2001 Aug 27

Schottky barrier double diodes

BAT120

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
BAT120A	AT120A
BAT120C	AT120C
BAT120S	AT120S

PINNING

PIN	BAT120		
	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

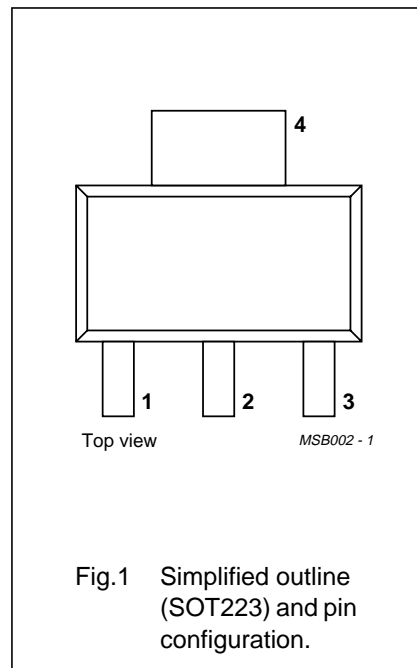


Fig.1 Simplified outline (SOT223) and pin configuration.

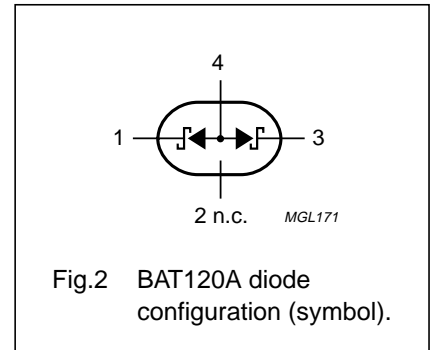


Fig.2 BAT120A diode configuration (symbol).

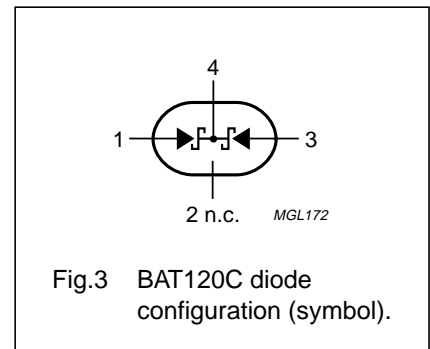


Fig.3 BAT120C diode configuration (symbol).

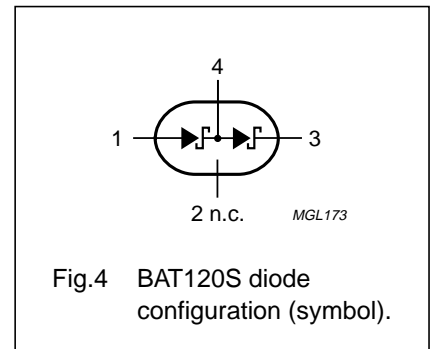


Fig.4 BAT120S diode configuration (symbol).

Schottky barrier double diodes

BAT120

LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
Per diode					
V_R	continuous reverse voltage		–	25	V
I_F	continuous forward current		–	1	A
I_{FSM}	non-repetitive peak forward current	$t_p < 10$ 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	°C
T_j	junction temperature		–	125	°C
T_{amb}	operating ambient temperature		–65	+125	°C

ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
Per diode					
V_F	forward voltage	see Fig.5			
		$I_F = 100$ mA	260	300	mV
		$I_F = 1$ A	400	450	mV
I_R	reverse current	$V_R = 20$ V; note 1; see Fig.6	80	500	μ A
		$V_R = 25$ V; note 1; see Fig.6	–	1	mA
		$V_R = 20$ V; $T_j = 100$ °C; note 1	–	10	mA
C_d	diode capacitance	$f = 1$ MHz; $V_R = 4$ V; see Fig.7	100	–	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

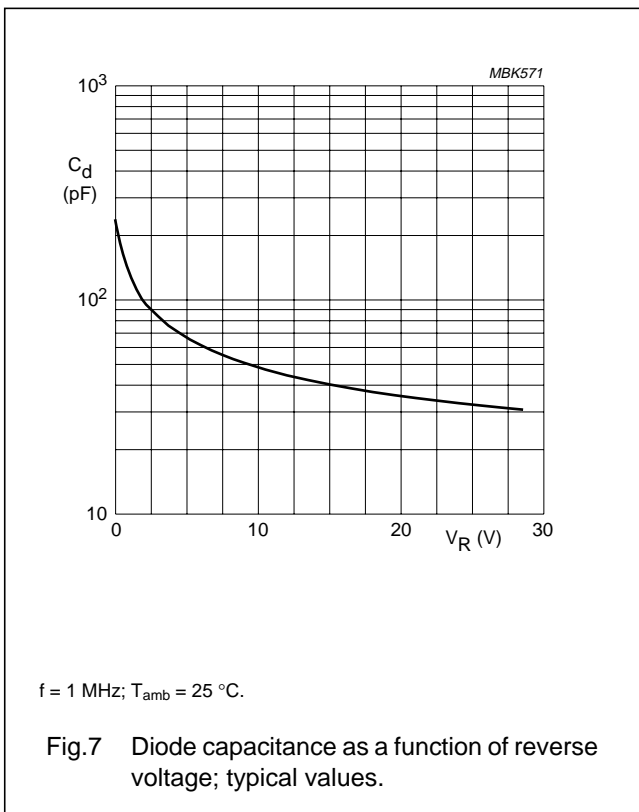
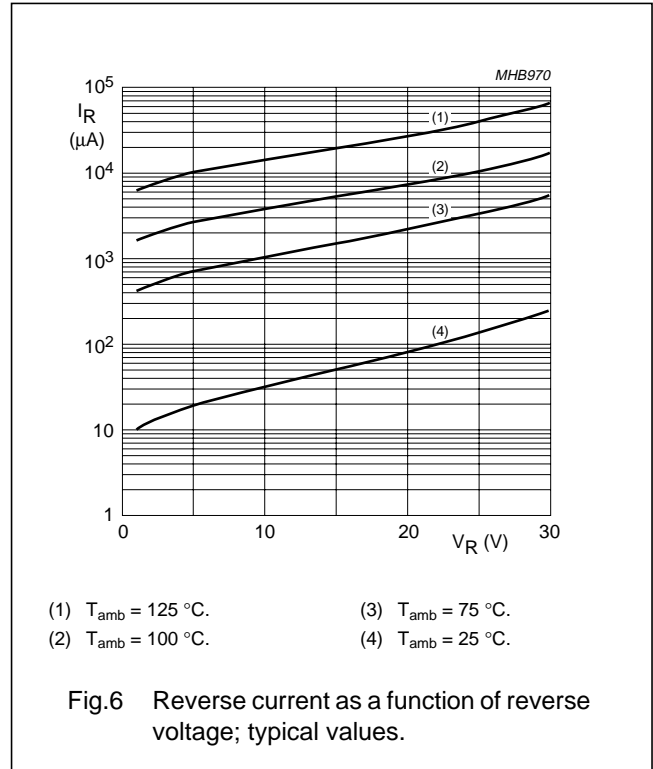
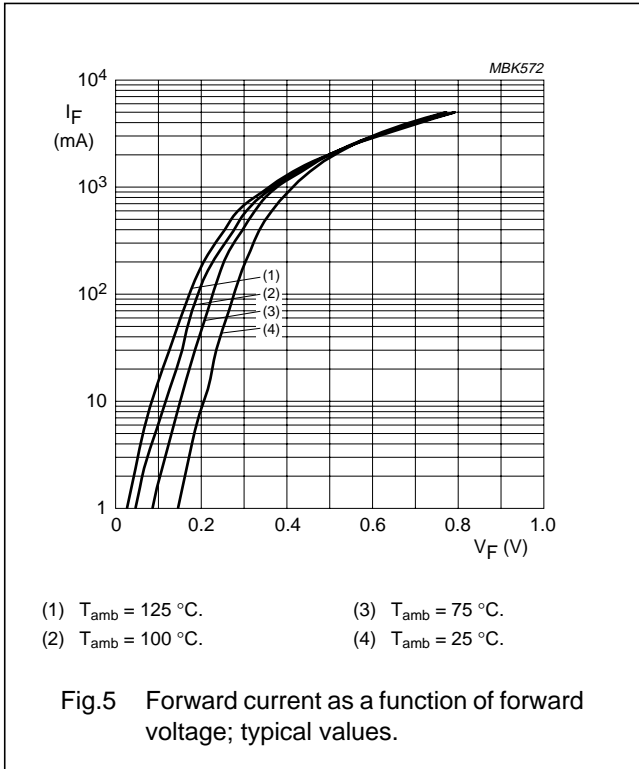
Note

1. Refer to SOT223 standard mounting conditions.

Schottky barrier double diodes

BAT120

GRAPHICAL DATA



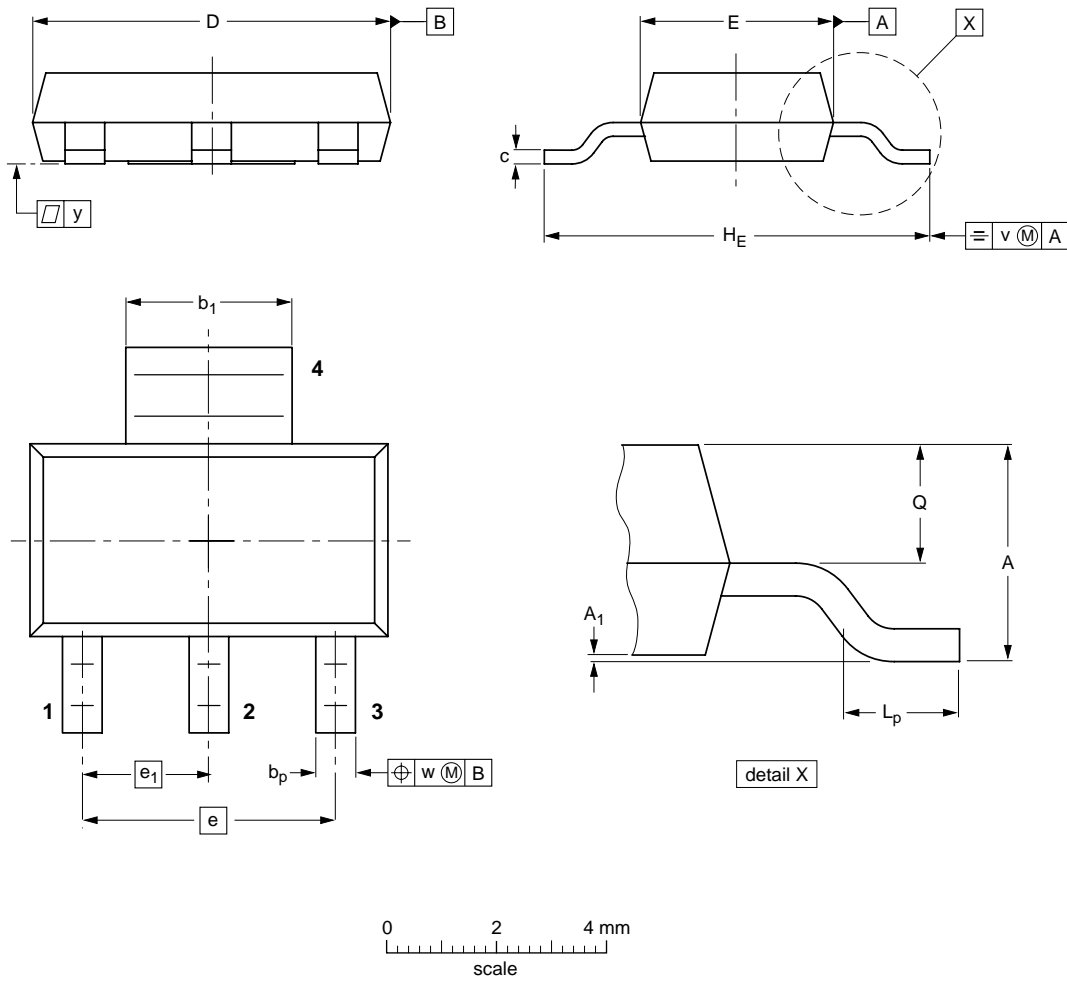
Schottky barrier double diodes

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PACKAGE OUTLINE

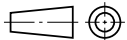
Plastic surface mounted package; collector pad for good heat transfer; 4 leads

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	0.10	0.80	3.1	0.32	6.7	3.7	4.6	2.3	7.3	1.1	0.95	0.2	0.1	0.1
	1.5	0.01	0.60	2.9	0.22	6.3	3.3			6.7	0.7	0.85			

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

Schottky barrier double diodes

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DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITIONS
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Schottky barrier double diodes

BAT120

NOTES

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