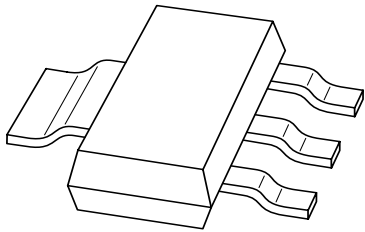


# DATA SHEET



## **BF723** PNP high-voltage transistor

Product data sheet  
Supersedes data of 1996 Dec 05

1999 Apr 21

# PNP high-voltage transistor

**BF723**

## FEATURES

- Low feedback capacitance.

## APPLICATIONS

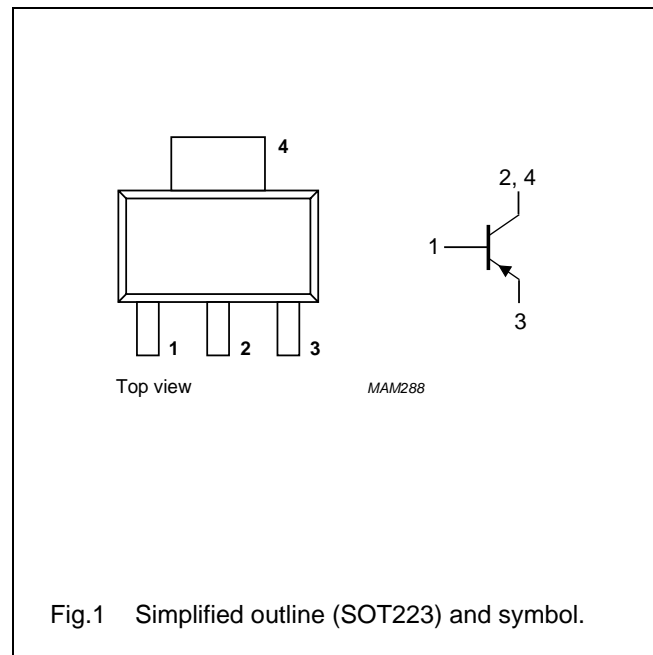
- Class-B video output stages of colour television receivers
- General purpose high voltage circuits.

## DESCRIPTION

PNP transistor in a SOT223 plastic package.  
NPN complement: BF722.

## PINNING

PIN	DESCRIPTION
1	base
2, 4	collector
3	emitter



## LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{CBO}$	collector-base voltage	open emitter	–	–250	V
$V_{CEO}$	collector-emitter voltage	open base	–	–250	V
$V_{EBO}$	emitter-base voltage	open collector	–	–5	V
$I_C$	collector current (DC)		–	–100	mA
$I_{CM}$	peak collector current		–	–200	mA
$I_{BM}$	peak base current		–	–100	mA
$P_{tot}$	total power dissipation	$T_{amb} \leq 25\text{ }^\circ\text{C}$ ; note 1	–	1.2	W
$T_{stg}$	storage temperature		–65	+150	$^\circ\text{C}$
$T_j$	junction temperature		–	150	$^\circ\text{C}$
$T_{amb}$	operating ambient temperature		–65	+150	$^\circ\text{C}$

## Note

1. Device mounted on printed-circuit board, single sided copper, tinplated, mounting pad for collector 1 cm<sup>2</sup>. For other mounting conditions, see “Thermal considerations for SOT223 in the General Part of associated Handbook”.

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## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	106	K/W
$R_{th\ j-s}$	thermal resistance from junction to soldering point	note 1	25	K/W

## Note

1. Device mounted on printed-circuit board, single sided copper, tinplated, mounting pad for collector 1 cm<sup>2</sup>. For other mounting conditions, see "Thermal considerations for SOT223 in the General Part of associated Handbook".

## CHARACTERISTICS

$T_j = 25\text{ °C}$  unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$I_{CBO}$	collector cut-off current	$I_E = 0; V_{CB} = -200\text{ V}$	–	–10	nA
		$I_E = 0; V_{CB} = -200\text{ V}; T_j = 150\text{ °C}$	–	–10	μA
$I_{EBO}$	emitter cut-off current	$I_C = 0; V_{EB} = -5\text{ V}$	–	–50	nA
$h_{FE}$	DC current gain	$I_C = -25\text{ mA}; V_{CE} = -20\text{ V}$	–50	–	
$V_{CEsat}$	collector-emitter saturation voltage	$I_C = -30\text{ mA}; I_B = -5\text{ mA}$	–	–0.6	V
$C_{re}$	feedback capacitance	$I_C = i_c = 0; V_{CE} = -30\text{ V}; f = 1\text{ MHz}$	–	2.5	pF
$f_T$	transition frequency	$I_C = -10\text{ mA}; V_{CE} = -10\text{ V}; f = 100\text{ MHz}$	60	–	MHz

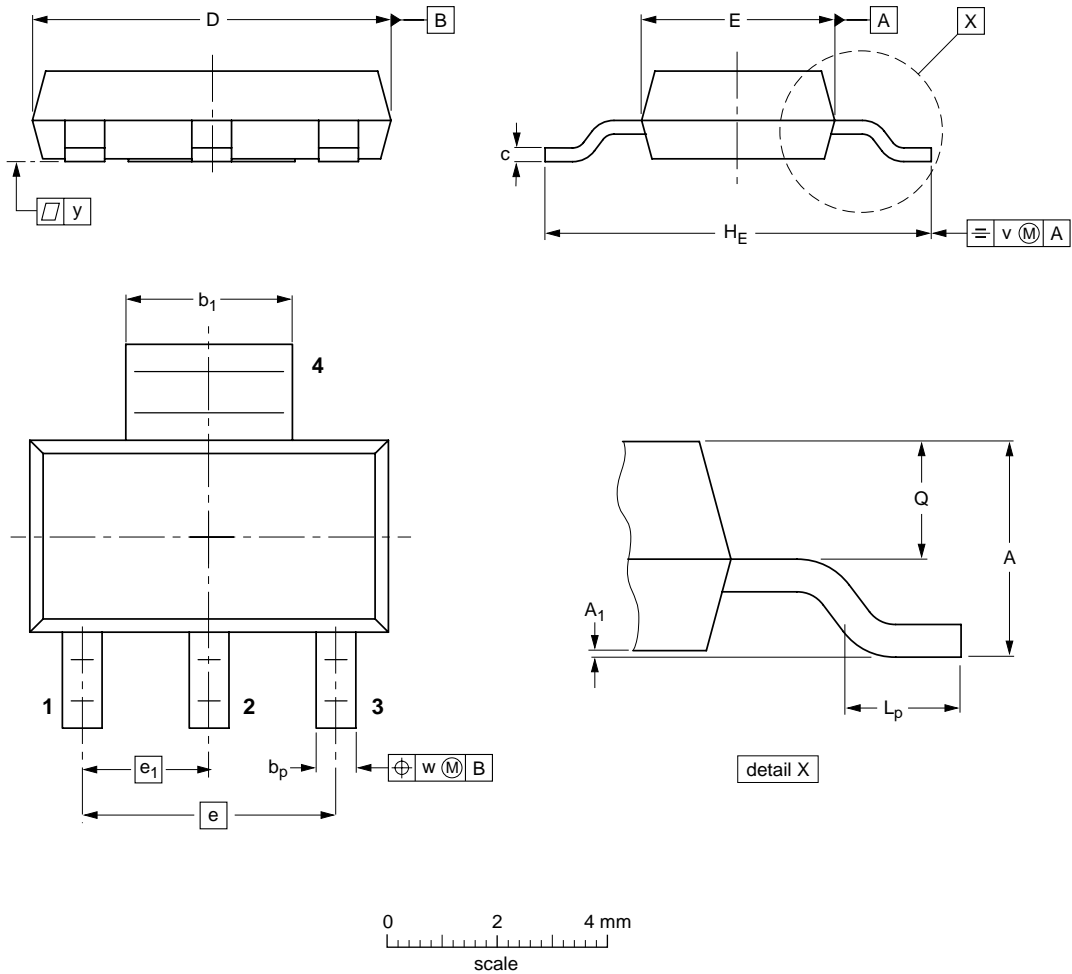
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PACKAGE OUTLINE

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

SOT223



DIMENSIONS (mm are the original dimensions)

UNIT	A	A <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

## PNP high-voltage transistor

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## 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.

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This data sheet was changed to reflect the new company name NXP Semiconductors, including new legal definitions and disclaimers. No changes were made to the technical content, except for package outline drawings which were updated to the latest version.

## **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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Printed in The Netherlands

115002/00/03/pp6

Date of release: 1999 Apr 21

Document order number: 9397 750 05698





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### Наши контакты:

**Телефон:** +7 812 627 14 35

**Электронная почта:** [sales@st-electron.ru](mailto:sales@st-electron.ru)

**Адрес:** 198099, Санкт-Петербург,  
Промышленная ул, дом № 19, литера Н,  
помещение 100-Н Офис 331