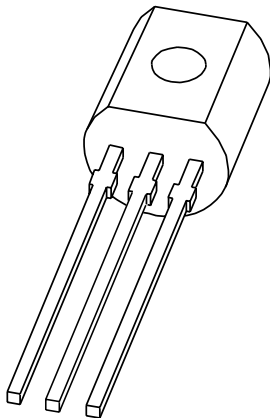


DATA SHEET



BF421; BF423 PNP high voltage transistors

Product specification
Supersedes data of 1996 Dec 09

2004 Nov 10

PNP high voltage transistors

BF421; BF423

FEATURES

- Low feedback capacitance.

APPLICATIONS

- Class-B video output stages in colour television and professional monitor equipment.

DESCRIPTION

PNP transistors in a TO-92 plastic package.
NPN complements: BF420 and BF422.

PINNING

PIN	DESCRIPTION
1	base
2	collector
3	emitter

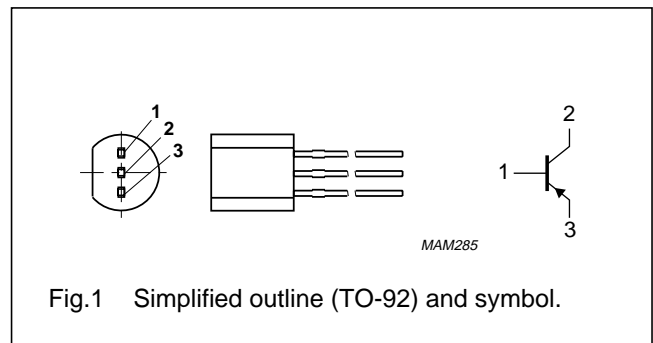


Fig.1 Simplified outline (TO-92) and symbol.

ORDERING INFORMATION

TYPE NUMBER	PACKAGE		
	NAME	DESCRIPTION	VERSION
BF421	SC-43A	plastic single-ended leaded (through hole) package; 3 leads	SOT54
BF423			

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CBO}	collector-base voltage	open emitter			
	BF421		–	–300	V
	BF423		–	–250	V
V_{CEO}	collector-emitter voltage	open base			
	BF421		–	–300	V
	BF423		–	–250	V
I_{CM}	peak collector current		–	–100	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25\text{ °C}$	–	830	mW
h_{FE}	DC current gain	$V_{CE} = -20\text{ V}; I_C = -25\text{ mA}$	50	–	
C_{re}	feedback capacitance	$V_{CE} = -30\text{ V}; I_C = i_c = 0\text{ A}; f = 1\text{ MHz}$	–	1.6	pF
f_T	transition frequency	$V_{CE} = -10\text{ V}; I_C = -10\text{ mA}; f = 100\text{ MHz}$	60	–	MHz

PNP high voltage transistors

BF421; BF423

LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V _{CBO}	collector-base voltage	open emitter			
	BF421		–	–300	V
	BF423		–	–250	V
V _{CEO}	collector-emitter voltage	open base			
	BF421		–	–300	V
	BF423		–	–250	V
V _{EBO}	emitter-base voltage	open collector	–	–5	V
I _C	collector current (DC)		–	–50	mA
I _{CM}	peak collector current		–	–100	mA
I _{BM}	peak base current		–	–50	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C; note 1	–	830	mW
T _{stg}	storage temperature		–65	+150	°C
T _j	junction temperature		–	150	°C
T _{amb}	ambient temperature		–65	+150	°C

Note

1. Transistor mounted on a printed-circuit board.

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R _{th(j-a)}	thermal resistance from junction to ambient	note 1	150	K/W

Note

1. Transistor mounted on a printed-circuit board.

CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I _{CBO}	collector-base cut-off current	V _{CB} = –200 V; I _E = 0 A	–	–10	nA
		V _{CB} = –200 V; I _E = 0 A; T _j = 150 °C	–	–10	μA
I _{EBO}	emitter-base cut-off current	V _{EB} = –5 V; I _C = 0 A	–	–50	nA
h _{FE}	DC current gain	V _{CE} = –20 V; I _C = –25 mA	50	–	
V _{CEsat}	collector-emitter saturation voltage	I _C = –30 mA; I _B = –5 mA	–	–0.6	V
C _{re}	feedback capacitance	V _{CE} = –30 V; I _C = i _c = 0 A; f = 1 MHz	–	1.6	pF
f _T	transition frequency	V _{CE} = –10 V; I _C = –10 mA; f = 100 MHz	60	–	MHz

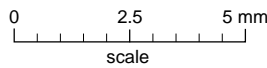
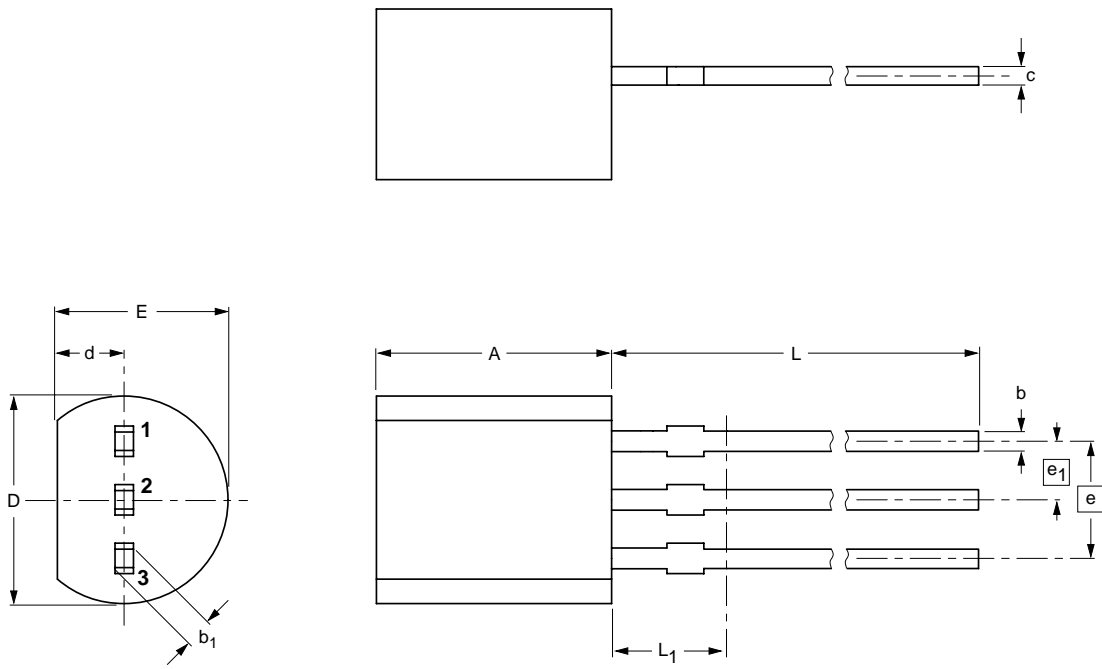
PNP high voltage transistors

BF421; BF423

PACKAGE OUTLINE

Plastic single-ended leaded (through hole) package; 3 leads

SOT54



DIMENSIONS (mm are the original dimensions)

UNIT	A	b	b ₁	c	D	d	E	e	e ₁	L	L ₁ ⁽¹⁾ max.
mm	5.2 5.0	0.48 0.40	0.66 0.55	0.45 0.38	4.8 4.4	1.7 1.4	4.2 3.6	2.54	1.27	14.5 12.7	2.5

Note

1. Terminal dimensions within this zone are uncontrolled to allow for flow of plastic and terminal irregularities.

OUTLINE VERSION	REFERENCES			EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	JEITA		
SOT54		TO-92	SC-43A		-97-02-28 04-06-28