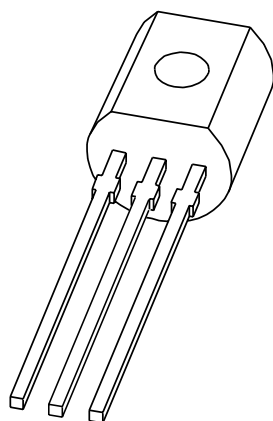


DATA SHEET



BF421L; BF423L PNP high-voltage transistors

Product specification
Supersedes data of 1999 Apr 21

2004 Nov 10

PNP high-voltage transistors

BF421L; BF423L

FEATURES

- Low current (max. 50 mA)
- High voltage (max. 300 V)
- Available with a higher power rating (830 mW) under type number: BF423.

APPLICATIONS

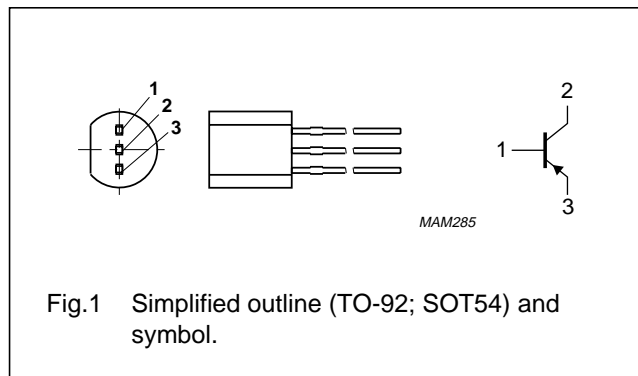
- Primarily intended for telephony applications.

DESCRIPTION

PNP transistor in a TO-92; SOT54 plastic package.
NPN complement: BF422L.

PINNING

PIN	DESCRIPTION
1	base
2	collector
3	emitter



ORDERING INFORMATION

TYPE NUMBER	PACKAGE		
	NAME	DESCRIPTION	VERSION
BF421L	SC-43A	plastic single-ended leaded (through hole) package; 3 leads	SOT54
BF423L			

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			
	BF421L		–	–300	V
	BF423L		–	–250	V
V_{CEO}	collector-emitter voltage	open base			
	BF421L		–	–300	V
	BF423L		–	–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		–	–100	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25\text{ }^\circ\text{C}$	–	625	mW
T_{stg}	storage temperature		–65	+150	$^\circ\text{C}$
T_j	junction temperature		–	150	$^\circ\text{C}$
T_{amb}	ambient temperature		–65	+150	$^\circ\text{C}$

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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th(j-a)}$	thermal resistance from junction to ambient	note 1	200	K/W

Note

1. Transistor mounted on an FR4 printed-circuit board.

CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I_{CBO}	collector-base cut-off current	$V_{CB} = -200\text{ V}; I_E = 0\text{ A}$	–	–10	nA
		$V_{CB} = -200\text{ V}; I_E = 0\text{ A}; T_j = 150\text{ °C}$	–	–10	μA
I_{EBO}	emitter-base cut-off current	$V_{EB} = -5\text{ V}; I_C = 0\text{ A}$	–	–10	μA
h_{FE}	DC current gain	$V_{CE} = -20\text{ V}; I_C = -25\text{ mA}$	50	–	
V_{CEsat}	collector-emitter saturation voltage	$I_C = -30\text{ mA}; I_B = -5\text{ mA}; \text{note 1}$	–	–600	mV
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

Note

1. Pulse test: $t_p \leq 300\text{ }\mu\text{s}$; $\delta \leq 0.02$.

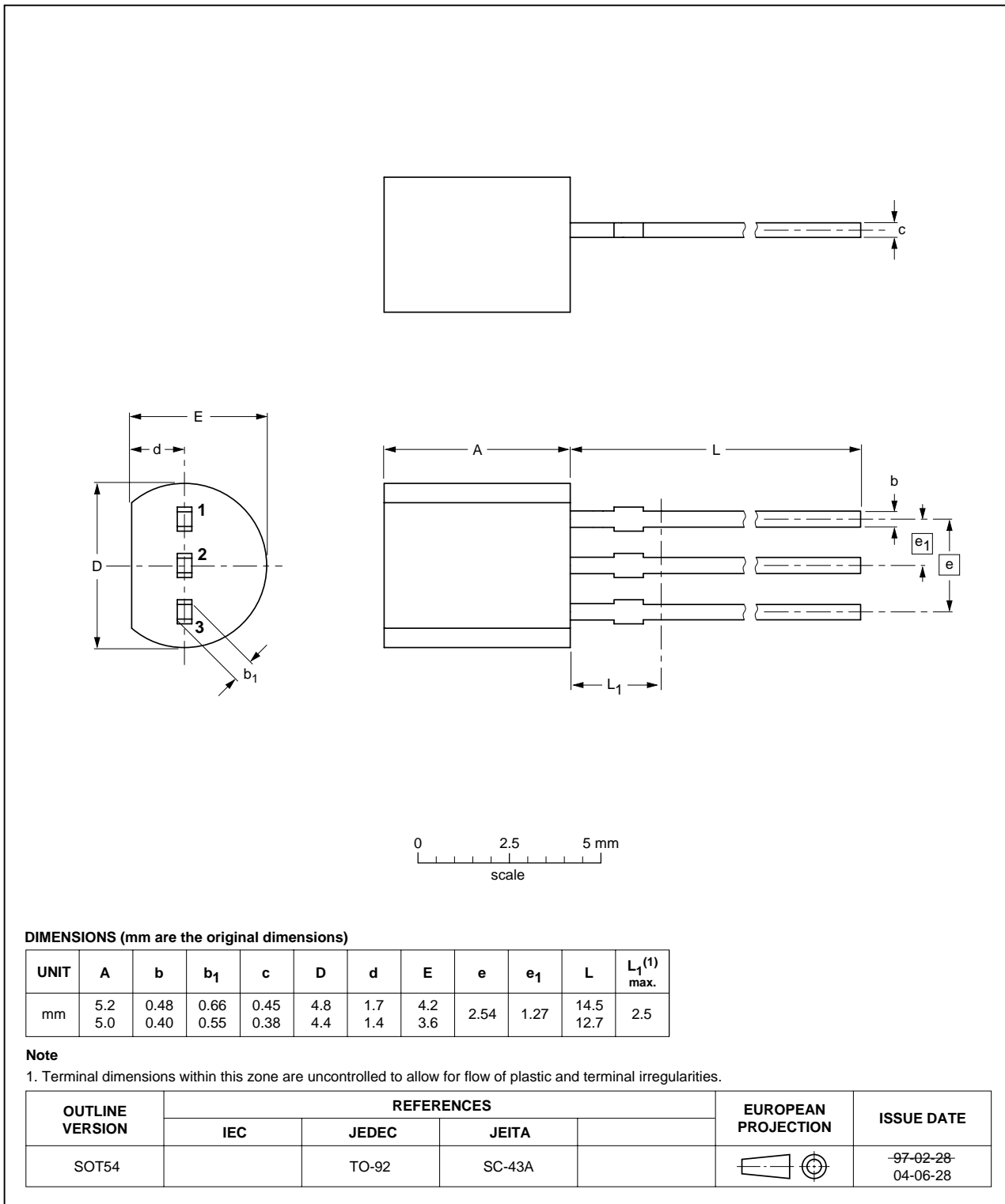
PNP high-voltage transistors

BF421L; BF423L

PACKAGE OUTLINE

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

SOT54



PNP high-voltage transistors

BF421L; BF423L

DATA SHEET STATUS

LEVEL	DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾⁽³⁾	DEFINITION
I	Objective data	Development	This data sheet contains data from the objective specification for product development. Philips Semiconductors reserves the right to change the specification in any manner without notice.
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Short-form specification — The data in a short-form specification is extracted from a full data sheet with the same type number and title. For detailed information see the relevant data sheet or data handbook.

Limiting values definition — Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 60134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.

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