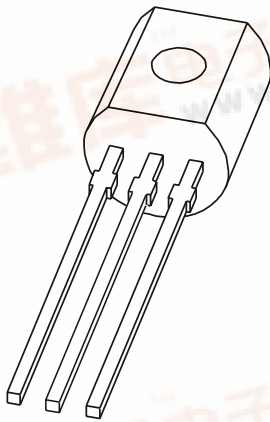


**DISCRETE SEMICONDUCTORS**

# DATA SHEET



**BF488**

**PNP high-voltage transistor**

Product specification

1999 Apr 27

Supersedes data of 1996 Dec 09

## PNP high-voltage transistor

BF488

## FEATURES

- Low feedback capacitance.

## APPLICATIONS

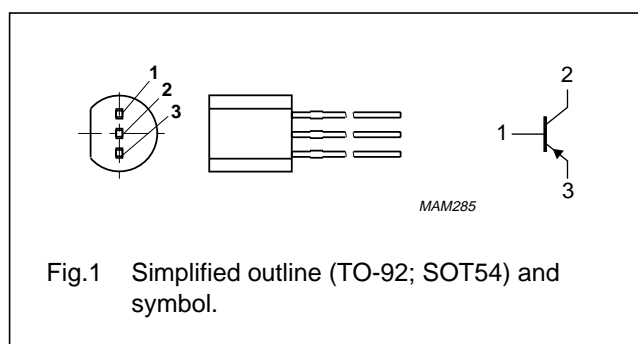
- Intended for use in video output stages of black and white and colour television receivers.

## DESCRIPTION

PNP transistor in a TO-92; SOT54 plastic package.  
NPN complements: BF483, BF485 and BF487.

## PINNING

PIN	DESCRIPTION
1	base
2	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	–	–350	V
$V_{CEO}$	collector-emitter voltage	open base	–	–350	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	$T_{amb} \leq 25\text{ °C}$ ; note 1	–	830	mW
$T_{stg}$	storage temperature		–65	+150	°C
$T_j$	junction temperature		–	150	°C
$T_{amb}$	operating ambient temperature		–65	+150	°C

## Note

1. Transistor mounted on a printed-circuit board.

## PNP high-voltage transistor

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## 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

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$I_{CBO}$	collector cut-off current	$I_E = 0; V_{CB} = -300\text{ V}$	–	–20	nA
		$I_E = 0; V_{CB} = -200\text{ V}; T_j = 150\text{ °C}$	–	–20	$\mu\text{A}$
$I_{EBO}$	emitter cut-off current	$I_C = 0; V_{EB} = -5\text{ V}$	–	–100	nA
$h_{FE}$	DC current gain	$I_C = -25\text{ mA}; V_{CE} = -20\text{ V}$	50	–	
		$I_C = -40\text{ mA}; V_{CE} = -20\text{ V}$	20	–	
$V_{CEsat}$	collector-emitter saturation voltage	$I_C = -20\text{ mA}; I_B = -2\text{ mA}$	–	–0.5	V
$C_c$	collector capacitance	$I_E = i_e = 0; V_{CB} = -20\text{ V}; f = 1\text{ MHz}$	–	4	pF
$C_{re}$	feedback capacitance	$I_C = i_c = 0; V_{CE} = -30\text{ V}; f = 1\text{ MHz}$	–	2.5	pF
$f_T$	transition frequency	$I_C = -10\text{ mA}; V_{CE} = -10\text{ V};$ $f = 100\text{ MHz}$	70	110	MHz

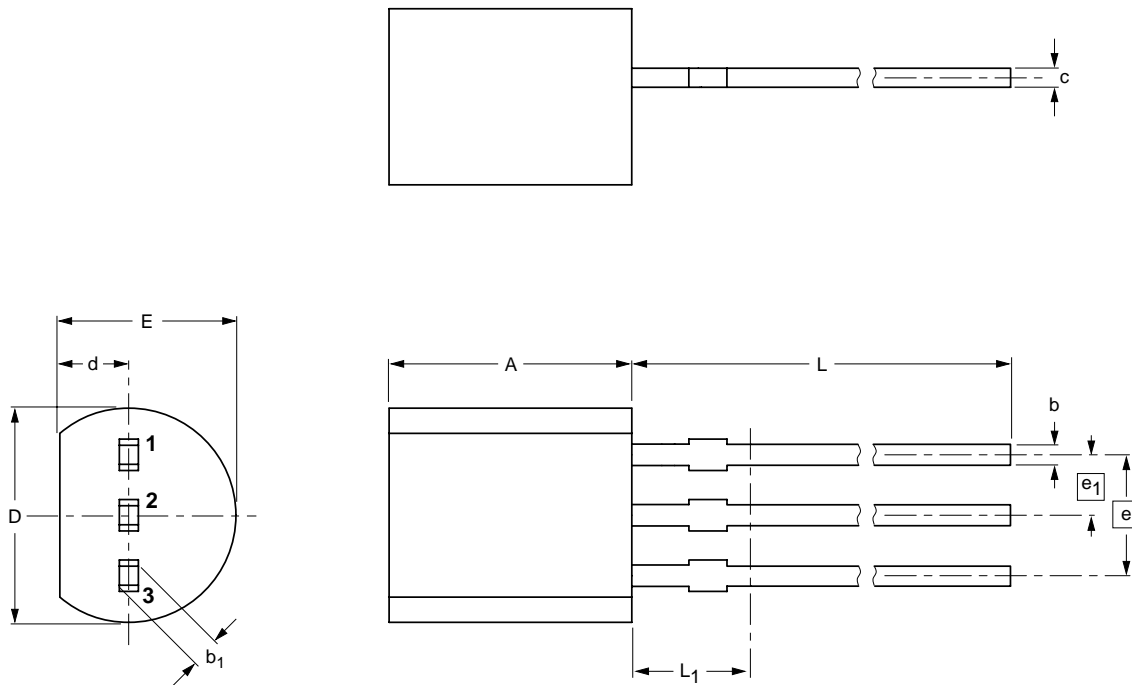
PNP high-voltage transistor

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PACKAGE OUTLINE

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

SOT54



DIMENSIONS (mm are the original dimensions)

UNIT	A	b	b <sub>1</sub>	c	D	d	E	e	e <sub>1</sub>	L	L <sub>1</sub> <sup>(1)</sup>
mm	5.2 5.0	0.48 0.40	0.66 0.56	0.45 0.40	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	EIAJ		
SOT54		TO-92	SC-43		97-02-28

## PNP high-voltage transistor

BF488

**DEFINITIONS**

<b>Data sheet status</b>	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
<b>Limiting values</b>	
Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). 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.	
<b>Application information</b>	
Where application information is given, it is advisory and does not form part of the specification.	

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**NOTES**

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**NOTES**

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