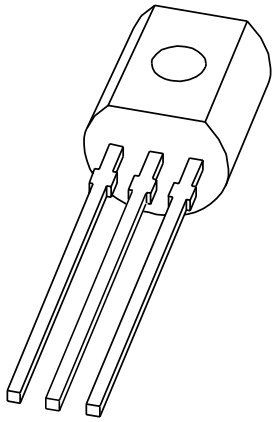
DATA SHEET



BF488
PNP high-voltage transistor

Product specification
Supersedes data of 1996 Dec 09

1999 Apr 27

Philips
Semiconductors

PHILIPS

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

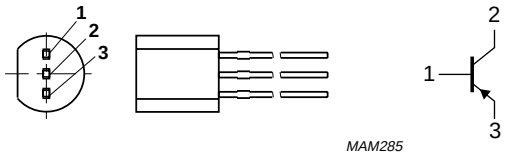


Fig.1 Simplified outline (TO-92; SOT54) and symbol.

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	$T_{amb} \leq 25$ °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.

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j\text{-}a}$	thermal resistance from junction to ambient	note 1	150	K/W

Note

1. Transistor mounted on a printed-circuit board.

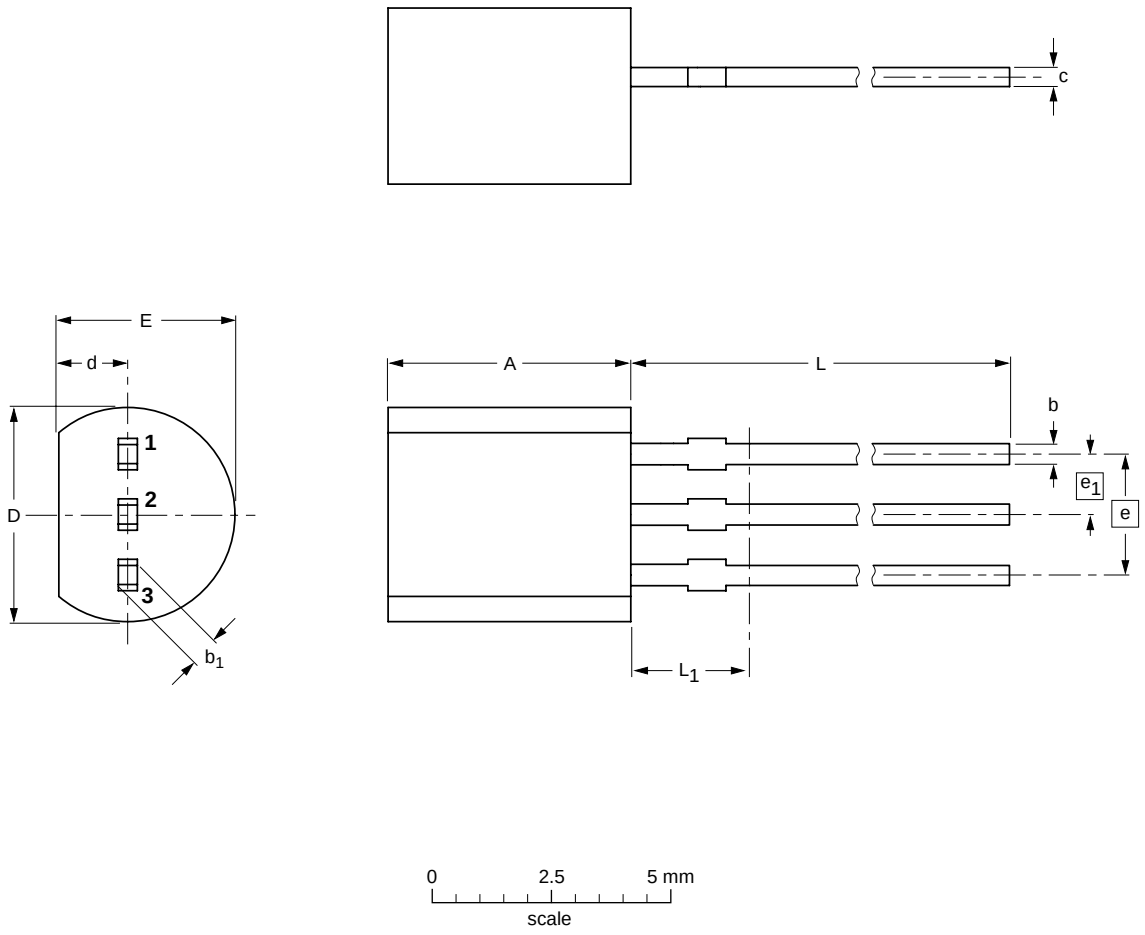
CHARACTERISTICS

T_j = 25 °C unless otherwise stated.

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

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)
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

DEFINITIONS

Data sheet status	
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.
Limiting values	
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.	
Application information	
Where application information is given, it is advisory and does not form part of the specification.	

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NOTES

NOTES

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