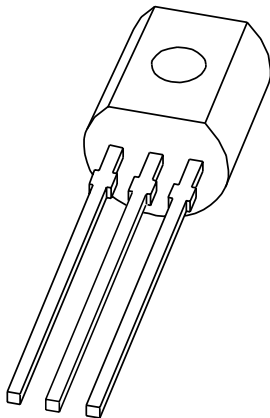


DATA SHEET



BF483; BF485; BF487 NPN high-voltage transistors

Product specification
Supersedes data of 1999 Apr 12

2004 Dec 08

NPN high-voltage transistors

BF483; BF485; BF487

FEATURES

- Low feedback capacitance.

APPLICATIONS

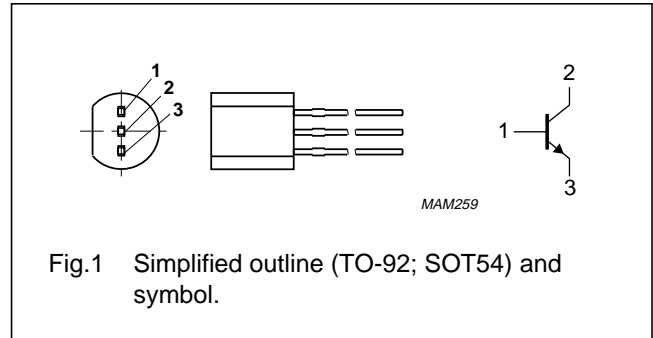
- Intended for use in video output stages in black-and-white and in colour television receivers.

DESCRIPTION

NPN transistor in a TO-92; SOT54 plastic package.
 PNP complement: BF488

PINNING

PIN	DESCRIPTION
1	base
2	collector
3	emitter



ORDERING INFORMATION

TYPE NUMBER	PACKAGE		
	NAME	DESCRIPTION	VERSION
BF483	SC-43A	plastic single-ended leaded (through hole) package; 3 leads	SOT54
BF485			
BF487			

NPN high-voltage transistors

BF483; BF485; BF487

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			
	BF483		–	300	V
	BF485		–	350	V
	BF487		–	400	V
V _{CEO}	collector-emitter voltage	open base			
	BF483		–	250	V
	BF485		–	300	V
	BF487		–	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} ≤ 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 an FR4 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 an FR4 printed-circuit board.

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I _{CBO}	collector-base cut-off current	V _{CB} = 300 V; I _E = 0 A	–	20	nA
		V _{CB} = 250 V; I _E = 0 A; T _j = 150 °C	–	20	μA
I _{EBO}	emitter-base cut-off current	V _{EB} = 5 V; I _C = 0 A	–	100	nA
h _{FE}	DC current gain	V _{CE} = 20 V			
		I _C = 25 mA	50	–	
		I _C = 40 mA	20	–	
V _{CEsat}	collector-emitter saturation voltage	I _C = 30 mA; I _B = 5 mA	–	600	mV
C _{re}	feedback capacitance	V _{CE} = 30 V; I _C = I _c = 0 A; f = 1 MHz	–	1.4	pF
f _T	transition frequency	V _{CE} = 10 V; I _C = –10 mA; f = 100 MHz	70	110	MHz

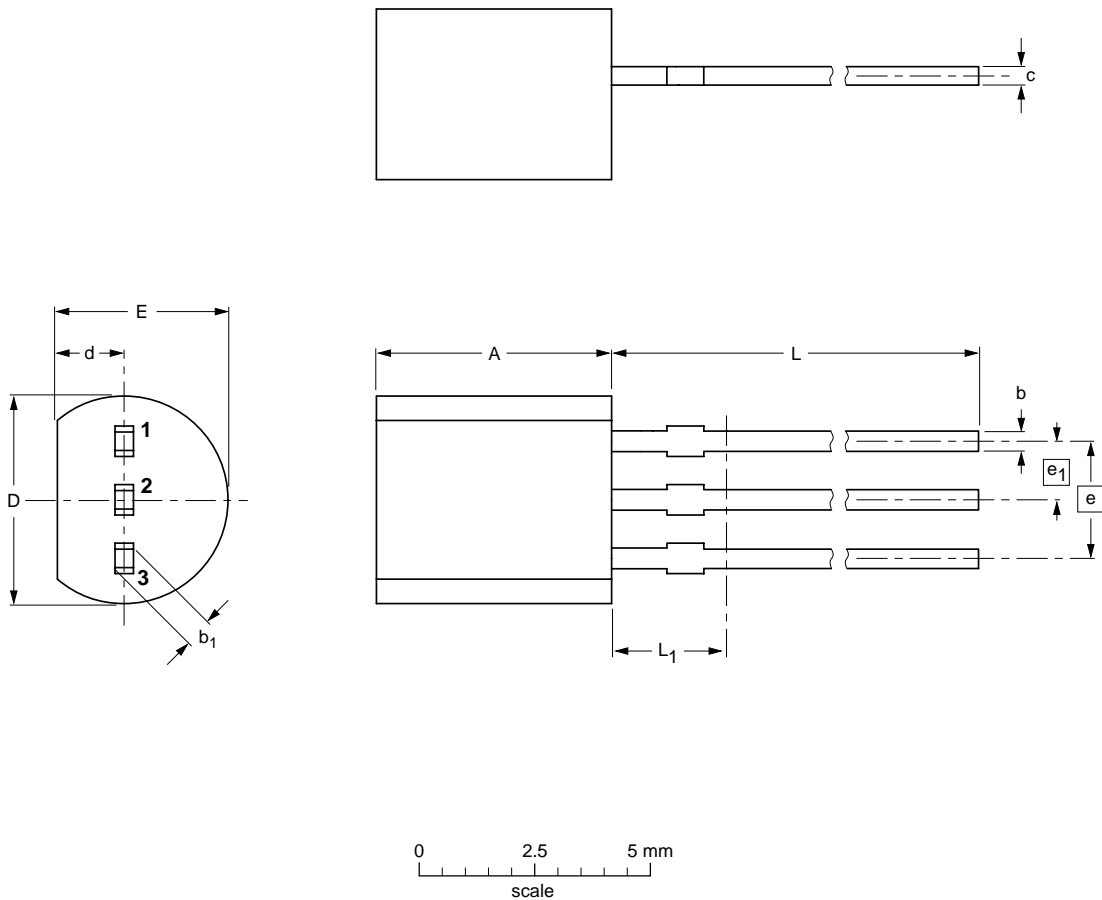
NPN high-voltage transistors

BF483; BF485; BF487

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		04-06-28 04-11-16

NPN high-voltage transistors

BF483; BF485; BF487

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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III	Product data	Production	This data sheet contains data from the product specification. Philips Semiconductors reserves the right to make changes at any time in order to improve the design, manufacturing and supply. Relevant changes will be communicated via a Customer Product/Process Change Notification (CPCN).

Notes

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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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SCA76

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