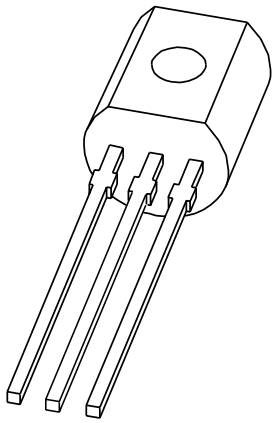
DATA SHEET



BF483; BF485; BF487
NPN high-voltage transistors

Product specification
Supersedes data of 1999 Apr 12

2004 Dec 08

Philips
Semiconductors

PHILIPS

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

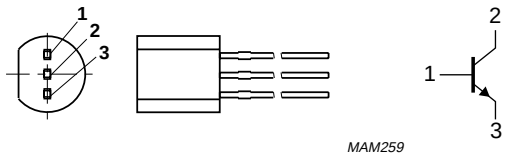


Fig.1 Simplified outline (TO-92; SOT54) and symbol.

ORDERING INFORMATION

TYPE NUMBER	PACKAGE		
	NAME	DESCRIPTION	VERSION
BF483	SC-43A	plastic single-ended leaded (through hole) package; 3 leads	SOT54
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	$T_{amb} \leq 25$ °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.

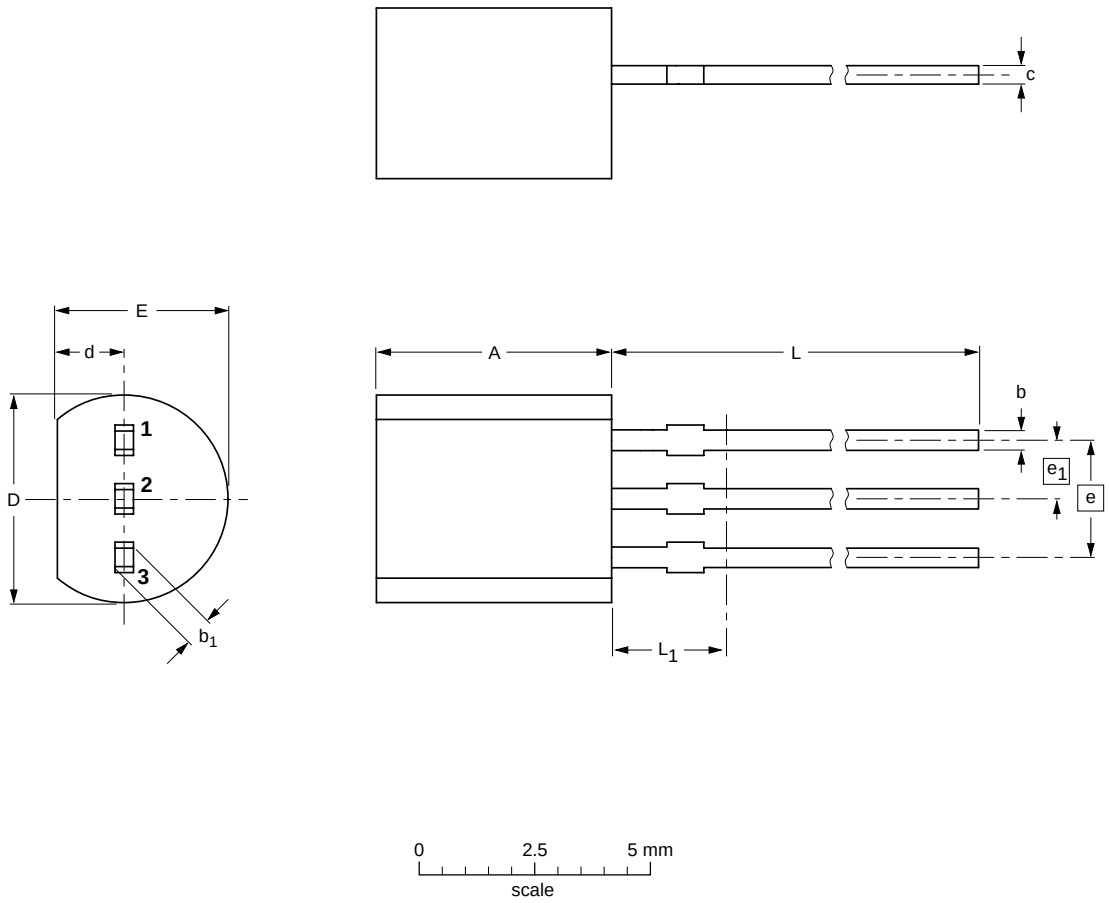
CHARACTERISTICS

T_{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

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