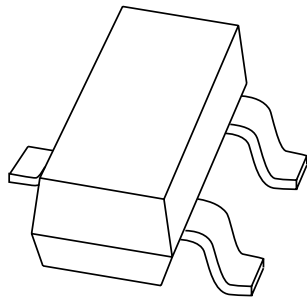


DATA SHEET



BCV26; BCV46 PNP Darlington transistors

Product specification
Supersedes data of 1997 Apr 23

1999 Apr 08

PNP Darlington transistors

BCV26; BCV46

FEATURES

- High current (max. 500 mA)
- Low voltage (max. 60 V)
- Very high DC current gain (min. 10000).

APPLICATIONS

- Where very high amplification is required.

DESCRIPTION

PNP Darlington transistor in a SOT23 plastic package.
NPN complements: BCV27 and BCV47.

MARKING

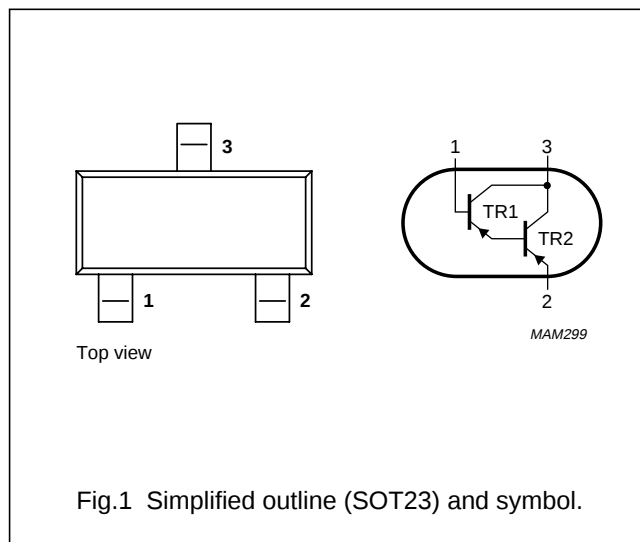
TYPE NUMBER	MARKING CODE ⁽¹⁾
BCV26	FD*
BCV46	FE*

Note

- * = p : Made in Hong Kong.
* = t : Made in Malaysia.

PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	collector



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			
	BCV26		–	–40	V
	BCV46		–	–80	V
V_{CES}	collector-emitter voltage	$V_{BE} = 0$			
	BCV26		–	–30	V
	BCV46		–	–60	V
V_{EBO}	emitter-base voltage	open collector	–	–10	V
I_C	collector current (DC)		–	–500	mA
I_{CM}	peak collector current		–	–800	mA
I_B	base current (DC)		–	–100	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25\text{ °C}$; note 1	–	250	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 an FR4 printed-circuit board.

PNP Darlington transistors

BCV26; BCV46

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	500	K/W

Note

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

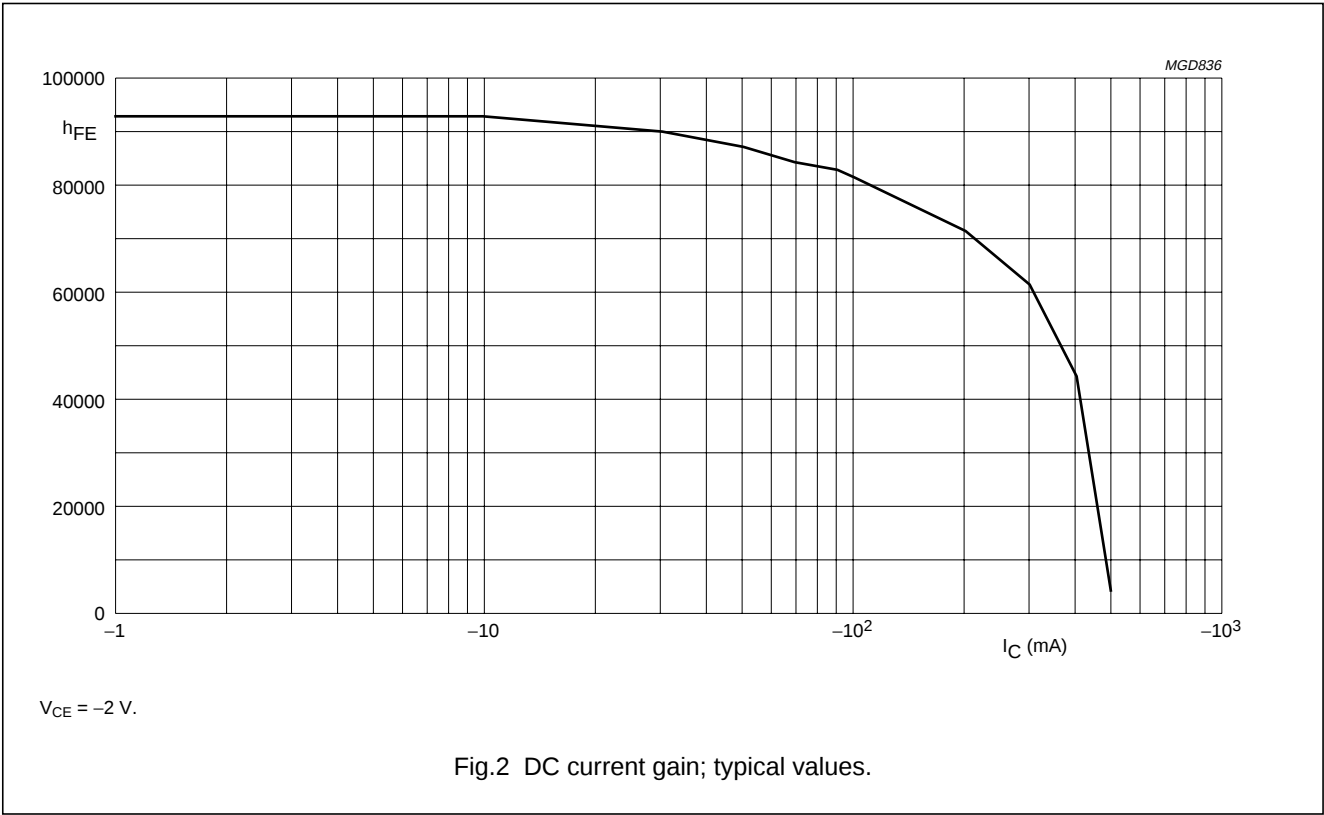
CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I_{CBO}	collector cut-off current					
	BCV26	$I_E = 0; V_{CB} = -30\text{ V}$	–	–	–100	nA
	BCV46	$I_E = 0; V_{CB} = -60\text{ V}$	–	–	–100	nA
I_{EBO}	emitter cut-off current	$I_C = 0; V_{EB} = -10\text{ V}$	–	–	–100	nA
h_{FE}	DC current gain	$I_C = -1\text{ mA}; V_{CE} = -5\text{ V};$ (see Fig.2)				
	BCV26		4000	–	–	
	BCV46		2000	–	–	
	DC current gain	$I_C = -10\text{ mA}; V_{CE} = -5\text{ V};$ (see Fig.2)				
	BCV26		10000	–	–	
	BCV46		4000	–	–	
	DC current gain	$I_C = -100\text{ mA}; V_{CE} = -5\text{ V};$ (see Fig.2)				
	BCV26		20000	–	–	
	BCV46		10000	–	–	
V_{CEsat}	collector-emitter saturation voltage	$I_C = -100\text{ mA}; I_B = -0.1\text{ mA}$	–	–	–1	V
V_{BEsat}	base-emitter saturation voltage	$I_C = -100\text{ mA}; I_B = -0.1\text{ mA}$	–	–	–1.5	V
V_{BEon}	base-emitter on-state voltage	$I_C = -10\text{ mA}; V_{CE} = -5\text{ V}$	–	–	–1.4	V
f_T	transition frequency	$I_C = -30\text{ mA}; V_{CE} = -5\text{ V}; f = 100\text{ MHz}$	–	220	–	MHz

PNP Darlington transistors

BCV26; BCV46



PNP Darlington transistors

BCV26; BCV46

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT23



PNP Darlington transistors

BCV26; BCV46

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.	

LIFE SUPPORT APPLICATIONS

These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. Philips customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Philips for any damages resulting from such improper use or sale.

PNP Darlington transistors

BCV26; BCV46

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