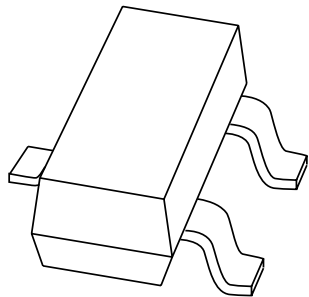


# DATA SHEET



## **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 <sup>(1)</sup>
BCV26	FD*
BCV46	FE*

### Note

1. \* = p : Made in Hong Kong.  
\* = t : Made in Malaysia.

### PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	collector

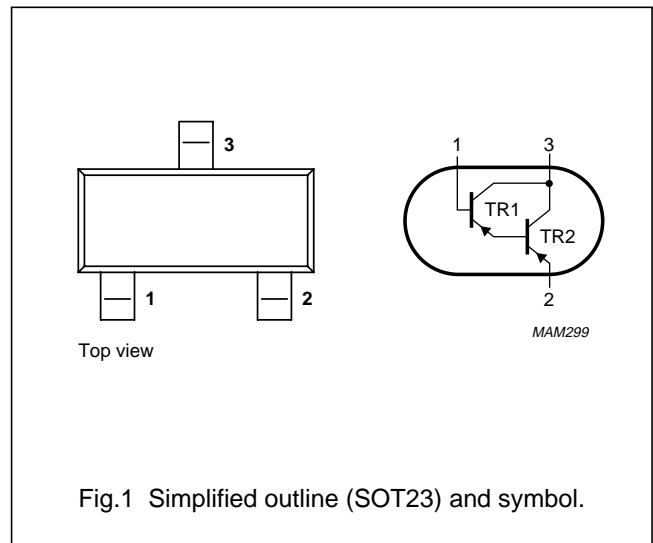


Fig.1 Simplified outline (SOT23) and symbol.

### LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V <sub>CBO</sub>	collector-base voltage	open emitter			
	BCV26		–	–40	V
	BCV46		–	–80	V
V <sub>CES</sub>	collector-emitter voltage	V <sub>BE</sub> = 0			
	BCV26		–	–30	V
	BCV46		–	–60	V
V <sub>EBO</sub>	emitter-base voltage	open collector	–	–10	V
I <sub>C</sub>	collector current (DC)		–	–500	mA
I <sub>CM</sub>	peak collector current		–	–800	mA
I <sub>B</sub>	base current (DC)		–	–100	mA
P <sub>tot</sub>	total power dissipation	T <sub>amb</sub> ≤ 25 °C; note 1	–	250	mW
T <sub>stg</sub>	storage temperature		–65	+150	°C
T <sub>j</sub>	junction temperature		–	150	°C
T <sub>amb</sub>	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.

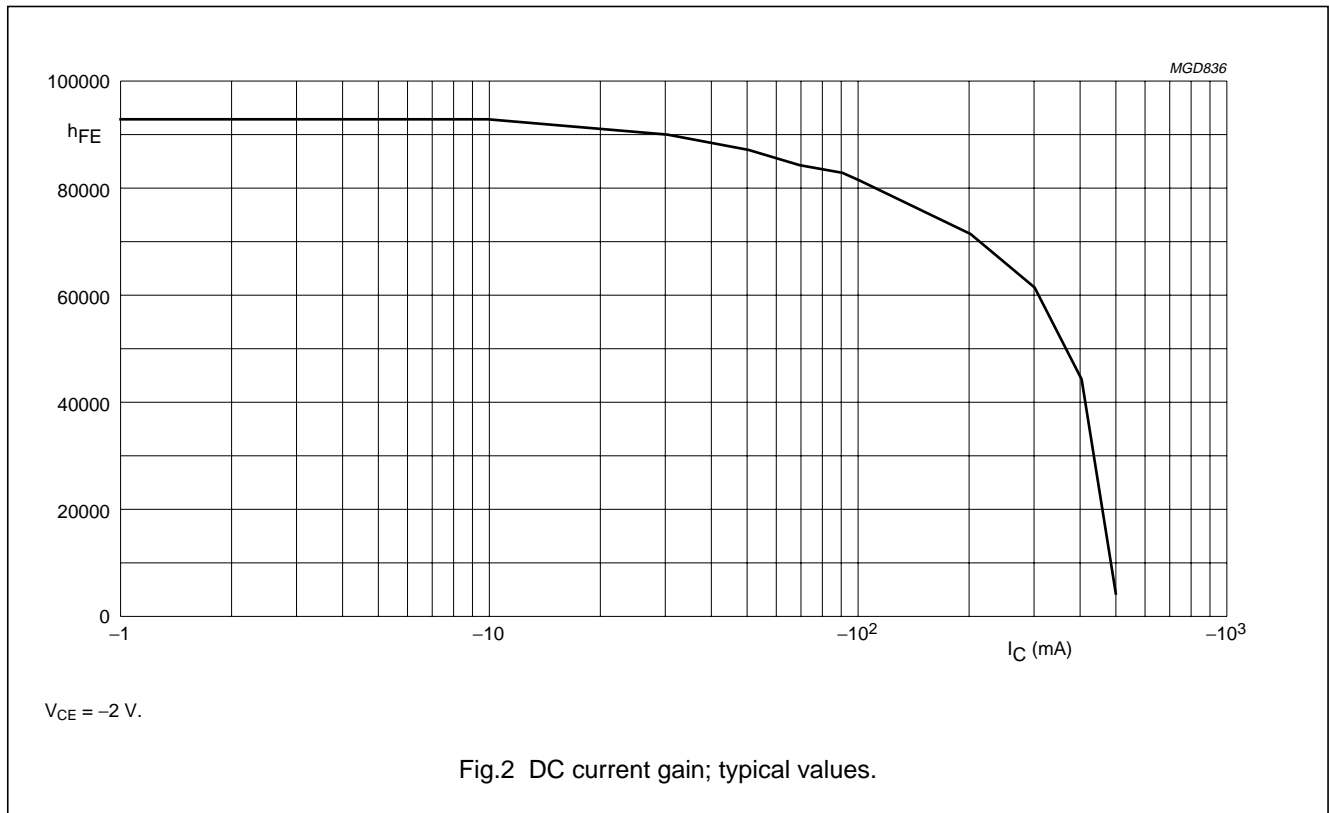
## CHARACTERISTICS

$T_{amb} = 25\text{ °C}$  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**

<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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PNP Darlington transistors

BCV26; BCV46

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