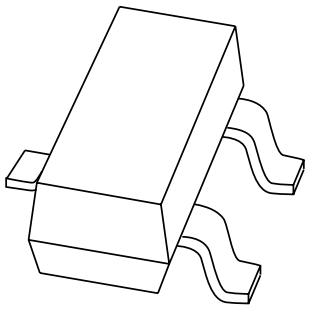
DATA SHEET



PMBTA64
PNP Darlington transistor

Product specification
Supersedes data of 1999 Apr 13

2002 Nov 07

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PNP Darlington transistor PMBTA64

FEATURES

- High current (max. 500 mA)
- Low voltage (max. 30 V)
- High DC current gain (min. 10000).

APPLICATIONS

- High input impedance preamplifiers.

DESCRIPTION

PNP Darlington transistor in a SOT23 plastic package.
NPN complement: PMBTA14.

MARKING

TYPE NUMBER	MARKING CODE(1)
PMBTA64	∗2V

Note

1. ∗ = p : Made in Hong Kong.
   ∗ = t : Made in Malaysia.

PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	collector

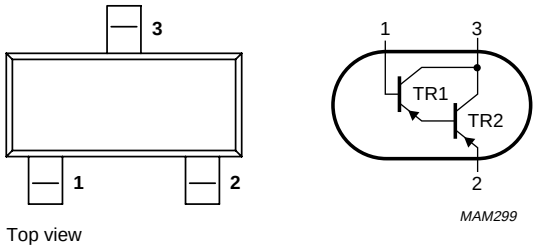


Fig.1 Simplified outline (SOT23) and symbol.

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CBO}	collector-base voltage	open emitter	–	–30	V
V_{CES}	collector-emitter voltage	V_{BE} = 0	–	–30	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)		–	–200	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25$ °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.

THERMAL CHARACTERISTICS

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

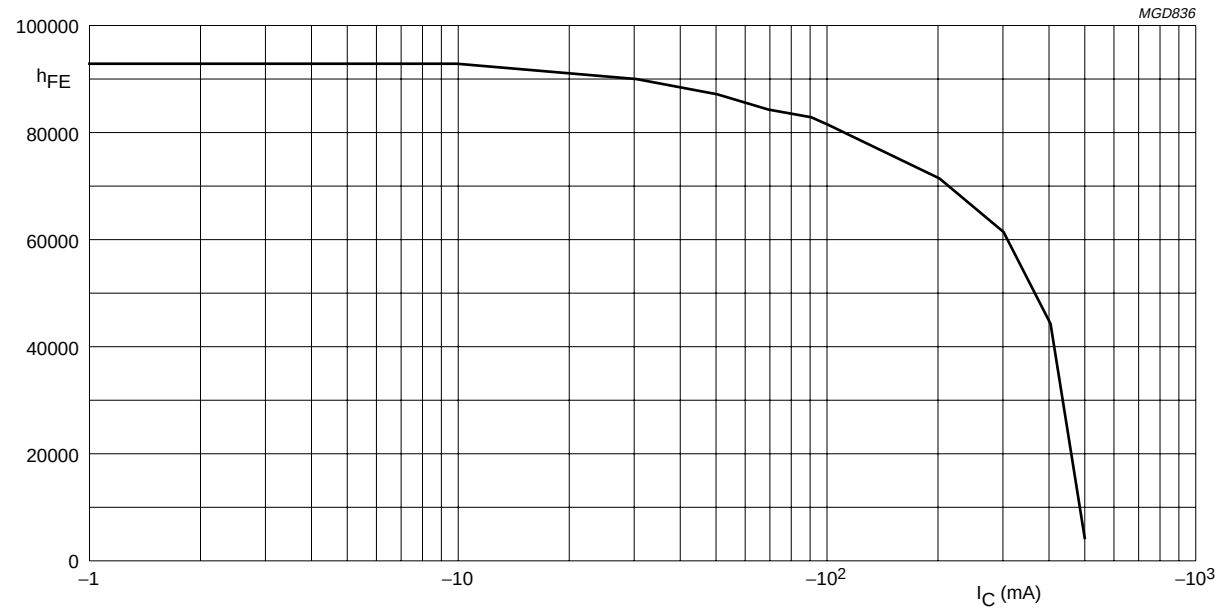
Note

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

CHARACTERISTICS

T_j = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I_{CBO}	collector cut-off current	I_E = 0; V_{CB} = –30 V	–	–100	nA
I_{EBO}	emitter cut-off current	I_C = 0; V_{EB} = –10 V;	–	–100	nA
h_{FE}	DC current gain	I_C = –10 mA; V_{CE} = –5 V; (see Fig.2)	10000	–	
		I_C = –100 mA; V_{CE} = –5 V; (see Fig.2)	20000	–	
V_{CEsat}	collector-emitter saturation voltage	I_C = –100 mA; I_B = –0.1 mA	–	–1.5	V
V_{BEon}	base-emitter on-state voltage	I_C = –100 mA; V_{CE} = –5 V	–	–2	V
f_T	transition frequency	I_C = –50 mA; V_{CE} = –5 V; f = 100 MHz	125	–	MHz

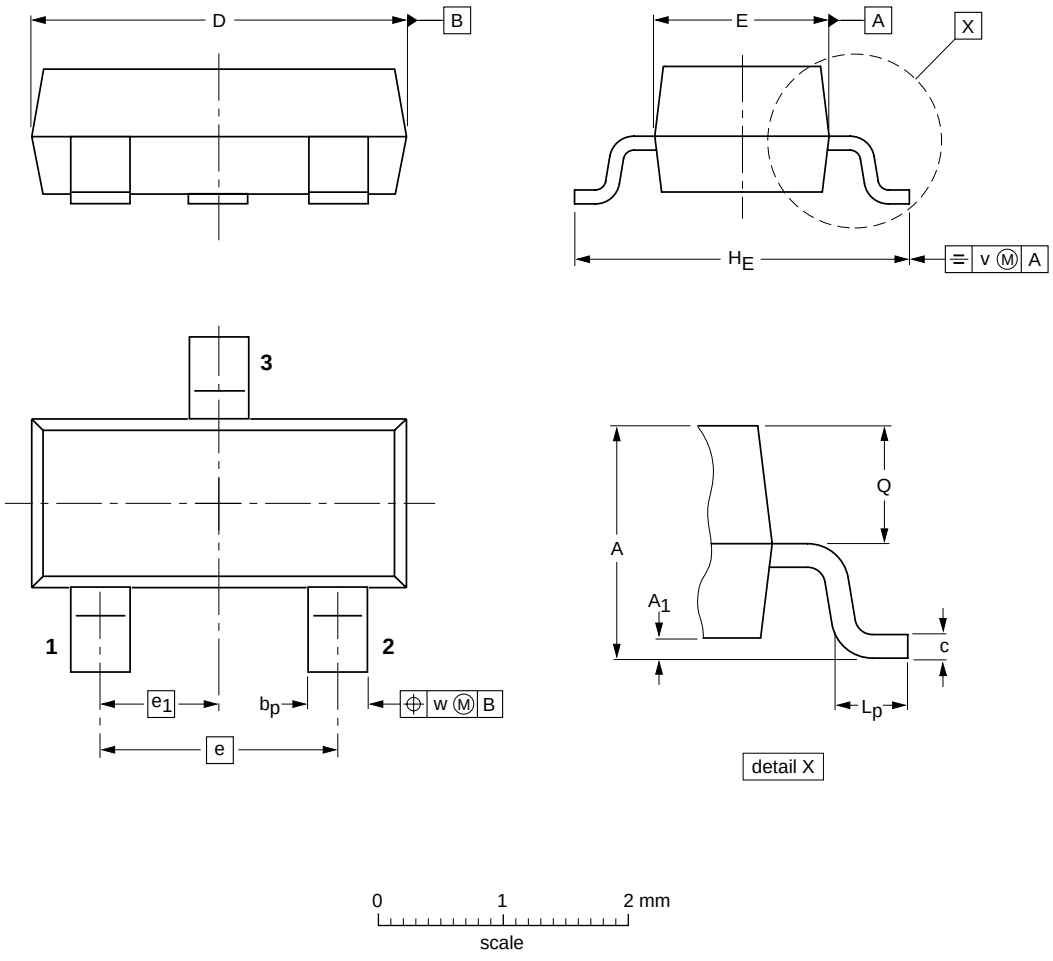


V_{CE} = –2 V.

Fig.2 DC gain current; typical values.

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads **SOT23**



DIMENSIONS (mm are the original dimensions)

UNIT	A	A_1 max.	b_p	c	D	E	e	e_1	H_E	L_p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT23		TO-236AB				~~97-02-28~~ 99-09-13

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LEVEL	DATA SHEET STATUS[1]	PRODUCT STATUS[2][3]	DEFINITION
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