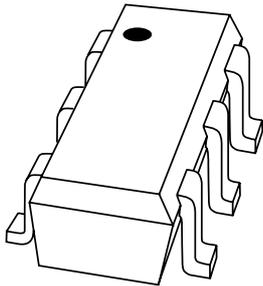


DATA SHEET



PUMB3

PNP resistor-equipped double transistor; $R1 = 4.7 \text{ k}\Omega$

Product specification

2001 Sep 19

PNP resistor-equipped double transistor; R1 = 4.7 kΩ

PUMB3

FEATURES

- Transistors with built-in bias resistor R1 (typ. 4.7 kΩ)
- No mutual interference between the transistors
- Simplification of circuit design
- Reduces number of components and board space.

APPLICATIONS

- General purpose switching and amplification
- Inverter and interface circuits
- Circuit driver.

DESCRIPTION

PNP resistor-equipped double transistor in an SC-88 (SOT363) plastic package.

MARKING

TYPE NUMBER	MARKING CODE ⁽¹⁾
PUMB3	B5*

Note

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

PINNING

PIN	DESCRIPTION
1, 4	emitter TR1; TR2
2, 5	base TR1; TR2
6, 3	collector TR1; TR2

QUICK REFERENCE DATA

SYMBOL	PARAMETER	MAX.	UNIT
V _{CEO}	collector-emitter voltage	-50	V
I _{CM}	peak collector current	-100	mA
TR1	PNP	-	-
TR2	PNP	-	-
R1	bias resistor	4.7	kΩ

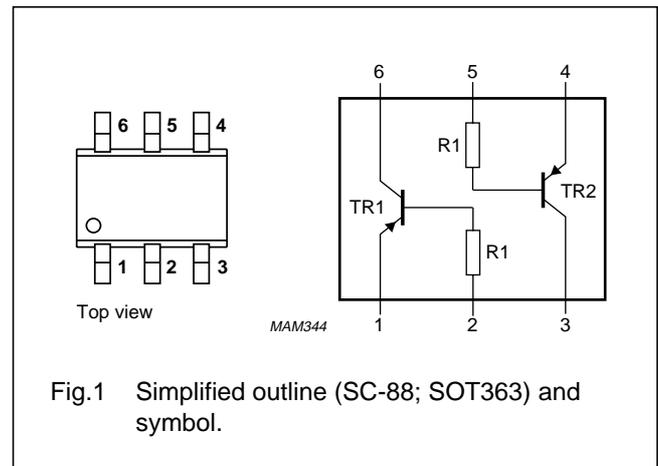


Fig.1 Simplified outline (SC-88; SOT363) and symbol.

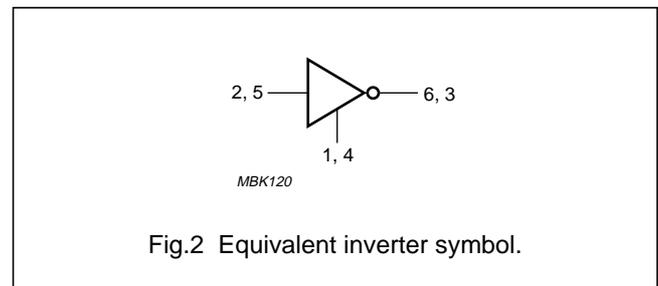


Fig.2 Equivalent inverter symbol.

PNP resistor-equipped double transistor; R1 = 4.7 k Ω

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LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
Per transistor					
V _{CBO}	collector-base voltage	open emitter	–	–50	V
V _{CEO}	collector-emitter voltage	open base	–	–50	V
V _{EBO}	emitter-base voltage	open collector	–	–10	V
V _I	input voltage		–	+10	V
			–	–40	V
I _O	output current (DC)		–	–100	mA
I _{CM}	peak collector current		–	–100	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C; note 1	–	200	mW
T _{stg}	storage temperature		–65	+150	°C
T _j	junction temperature		–	150	°C
T _{amb}	operating ambient temperature		–65	+150	°C
Per device					
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C; note 1	–	300	mW

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	416	K/W

Note

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

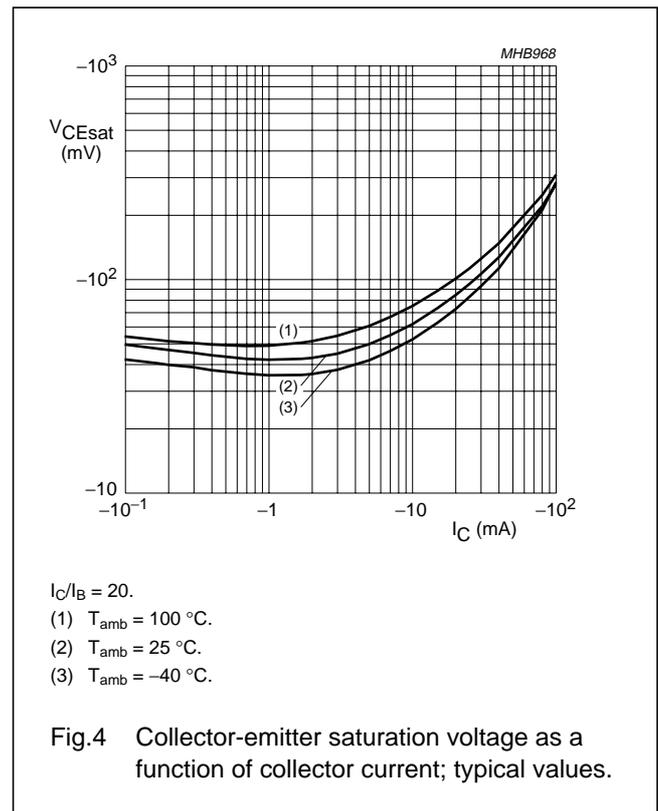
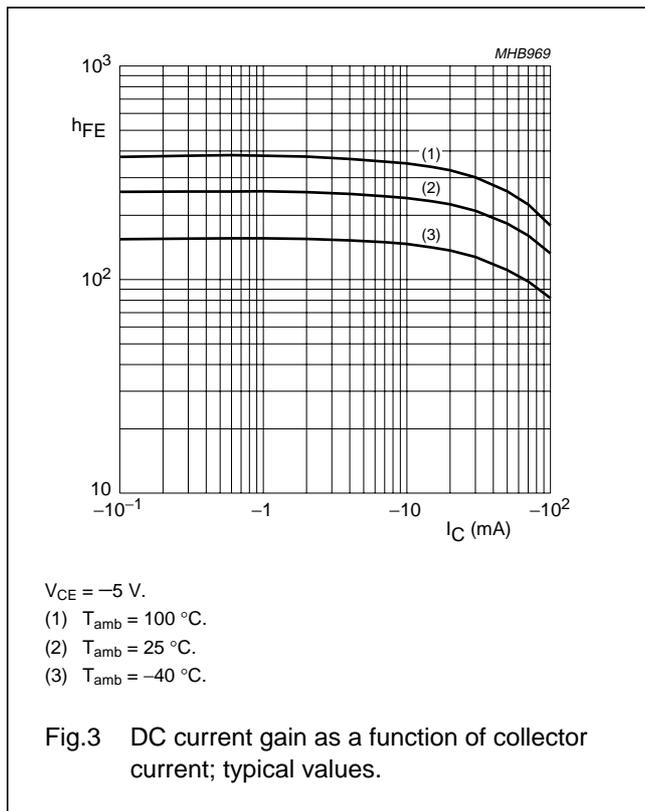
PNP resistor-equipped double transistor; R1 = 4.7 kΩ

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CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Per transistor						
I _{CBO}	collector-base cut-off current	V _{CB} = -50 V; I _E = 0	-	-	-100	nA
I _{CEO}	collector-emitter cut-off current	V _{CE} = -30 V; I _B = 0	-	-	-1	μA
		V _{CE} = -30 V; I _B = 0; T _j = 150 °C	-	-	-50	μA
I _{EBO}	emitter-base cut-off current	V _{EB} = -5 V; I _C = 0	-	-	-100	nA
h _{FE}	DC current gain	V _{CE} = -5 V; I _C = -1 mA	200	-	-	
V _{CEsat}	saturation voltage	I _C = -5 mA; I _B = -0.25 mA	-	-	-100	mV
R ₁	input resistor		3.3	4.7	6.1	kΩ
C _c	collector capacitance	I _E = i _e = 0; V _{CB} = -10 V; f = 1 MHz	-	-	3	pF



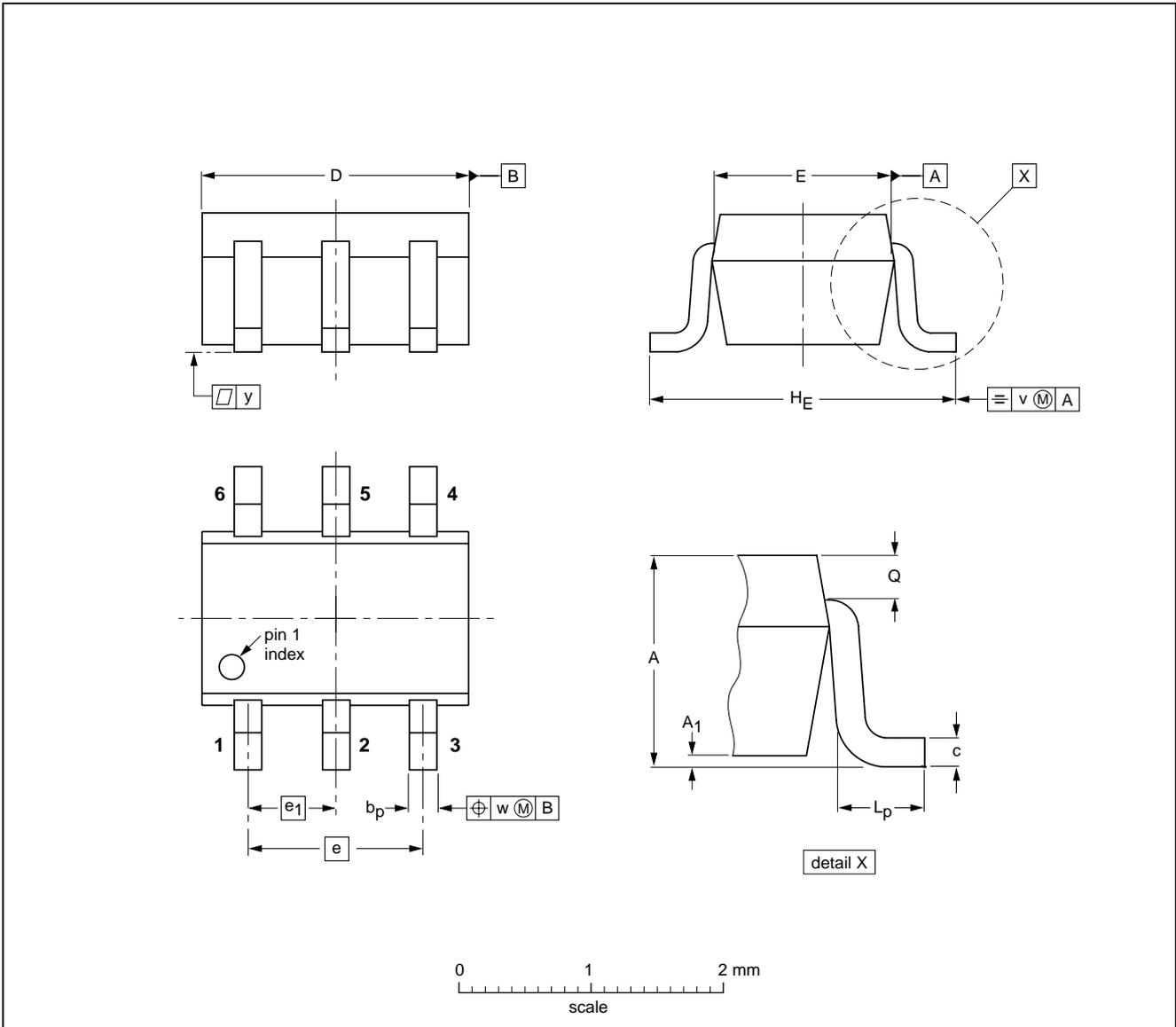
PNP resistor-equipped double transistor; R1 = 4.7 kΩ

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PACKAGE OUTLINE

Plastic surface mounted package; 6 leads

SOT363



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	y
mm	1.1 0.8	0.1	0.30 0.20	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.25 0.15	0.2	0.2	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT363			SC-88			97-02-28

PNP resistor-equipped double transistor; R1 = 4.7 kΩ

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DATA SHEET STATUS

DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITIONS
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