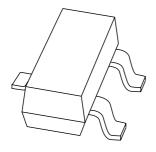
DISCRETE SEMICONDUCTORS

DATA SHEET



BCX17; BCX18 PNP general purpose transistors

Product data sheet Supersedes data of 1999 May 31 2004 Jan 16



PNP general purpose transistors

BCX17; **BCX18**

FEATURES

• High current (max. 500 mA)

• Low voltage (max. 45 V).

APPLICATIONS

Saturated switching and driver applications e.g. for industrial service

• Thick and thin-film circuits.

DESCRIPTION

PNP transistor in a SOT23 plastic package. NPN complement: BCX19.

MARKING

TYPE NUMBER	MARKING CODE(1)
BCX17	T1*
BCX18	T2*

Note

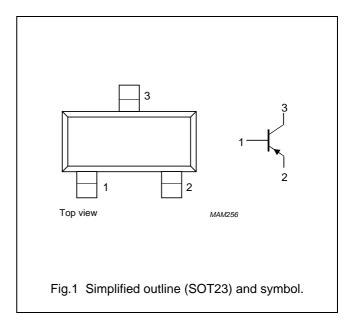
1. * = p: Made in Hong Kong.

* = t : Made in Malaysia.

* = W : Made in China.

PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	collector



ORDERING INFORMATION

TYPE	PACKAGE				
NUMBER	NAME	DESCRIPTION VERS			
BCX17	_	plastic surface mounted package; 3 leads	SOT23		
BCX18					

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PNP general purpose transistors

BCX17; BCX18

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			
	BCX17		_	-50	V
	BCX18		_	-30	V
V _{CEO}	collector-emitter voltage	open base			
	BCX17		_	-45	V
	BCX18		_	-25	V
V _{EBO}	emitter-base voltage	open collector	_	- 5	V
I _C	collector current (DC)		_	-500	mA
I _{CM}	peak collector current		_	-1	А
I _{BM}	peak base current		_	-200	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C; note 1	_	250	mW
T _{stg}	storage temperature		-65	+150	°C
Tj	junction temperature		_	150	°C
T _{amb}	operating ambient temperature		-65	+150	°C

Note

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.

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^{1.} Transistor mounted on an FR4 printed-circuit board.

PNP general purpose transistors

BCX17; BCX18

CHARACTERISTICS

 $T_j = 25$ °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I _{CBO}	collector cut-off current	I _E = 0; V _{CB} = -20 V	_	_	-100	nA
		$I_E = 0$; $V_{CB} = -20 \text{ V}$; $T_j = 150 ^{\circ}\text{C}$	_	_	-5	μΑ
I _{EBO}	emitter cut-off current	$I_C = 0; V_{EB} = -5 \text{ V}$	_	_	-100	nA
h _{FE}	DC current gain	$I_C = -100 \text{ mA}; V_{CE} = -1 \text{ V}$	100	_	600	
		$I_C = -300 \text{ mA}; V_{CE} = -1 \text{ V}$	70	_	_	
		$I_C = -500 \text{ mA}; V_{CE} = -1 \text{ V}$	40	_	_	
V _{CEsat}	collector-emitter saturation voltage	$I_C = -500 \text{ mA}; I_B = -50 \text{ mA}$	_	_	-620	mV
V_{BE}	base-emitter voltage	$I_C = -500 \text{ mA}$; $V_{CE} = -1 \text{ V}$; note 1	_	_	-1.2	V
C _c	collector capacitance	$I_E = I_e = 0$; $V_{CB} = -10 \text{ V}$; $f = 1 \text{ MHz}$	_	9	_	pF
f _T	transition frequency	$I_C = -10 \text{ mA}; V_{CE} = -5 \text{ V}; f = 100 \text{ MHz}$	80	_	_	MHz

Note

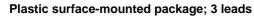
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^{1.} V_{BE} decreases by approximately -2 mV/ $^{\circ}$ C with increasing temperature.

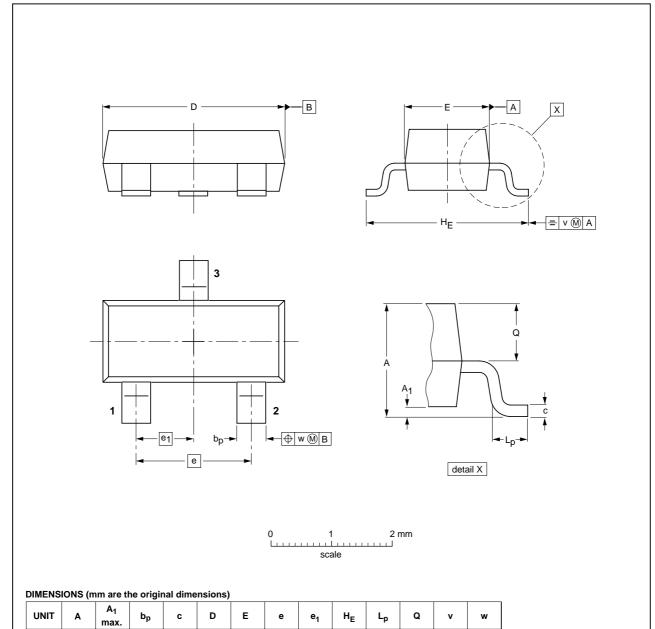
PNP general purpose transistors

BCX17; BCX18

PACKAGE OUTLINE



SOT23



OUTLINE	REFERENCES		EUROPEAN	ISSUE DATE		
VERSION	IEC	JEDEC	JEITA		PROJECTION	ISSUE DATE
SOT23		TO-236AB				-04-11-04 06-03-16

0.45

0.55

0.1

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0.38

0.9

PNP general purpose transistors

BCX17; BCX18

DATA SHEET STATUS

DOCUMENT STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITION
Objective data sheet	Development	This document contains data from the objective specification for product development.
Preliminary data sheet	Qualification	This document contains data from the preliminary specification.
Product data sheet	Production	This document contains the product specification.

Notes

- 1. Please consult the most recently issued document before initiating or completing a design.
- 2. The product status of device(s) described in this document may have changed since this document was published and may differ in case of multiple devices. The latest product status information is available on the Internet at URL http://www.nxp.com.

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Customer notification

This data sheet was changed to reflect the new company name NXP Semiconductors, including new legal definitions and disclaimers. No changes were made to the technical content, except for package outline drawings which were updated to the latest version.

Contact information

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