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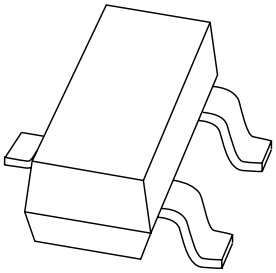
If you have any questions related to the data sheet, please contact our nearest sales office via e-mail or telephone (details via **salesaddresses@nexperia.com**). Thank you for your cooperation and understanding,

Kind regards,

Team Nexperia

DATA SHEET



BF570
NPN medium frequency transistor

Product data sheet
Supersedes data of 2004 Jan 13

2004 Mar 15

NPN medium frequency transistor BF570

FEATURES

- Low current (max. 100 mA)
- Low voltage (max. 15 V)
- Low feedback capacitance (max. 2.2 pF).

APPLICATIONS

- Monitors
- Battery equipped applications.

DESCRIPTION

NPN transistor in a SOT23 plastic package.

MARKING

TYPE NUMBER	MARKING CODE(1)
BF570	61* or B26

Note

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

PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	collector

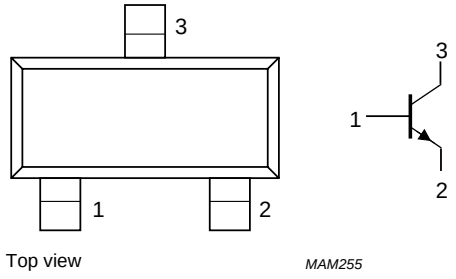


Fig.1 Simplified outline (SOT23) and symbol.

ORDERING INFORMATION

TYPE NUMBER	PACKAGE		
	NAME	DESCRIPTION	VERSION
BF570	–	plastic surface mounted package; 3 leads	SOT23

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CBO}	collector-base voltage	open emitter	–	40	V
V_{CEO}	collector-emitter voltage	open base	–	15	V
I_{CM}	peak collector current		–	200	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25$ °C	–	250	mW
h_{FE}	DC current gain	I_C = 10 mA; V_{CE} = 1 V	40	–	
f_T	transition frequency	I_C = 40 mA; V_{CE} = 10 V; f = 100 MHz	490	–	MHz

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	–	40	V
V_{CEO}	collector-emitter voltage	open base	–	15	V
V_{EBO}	emitter-base voltage	open collector	–	4.5	V
I_C	collector current (DC)		–	100	mA
I_{CM}	peak collector current		–	200	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25$ °C	–	250	mW
T_{stg}	storage temperature		−65	+150	°C
T_j	junction temperature		–	150	°C
T_{amb}	operating ambient temperature		−65	+150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th(j-a)}$	thermal resistance from junction to ambient	500	K/W

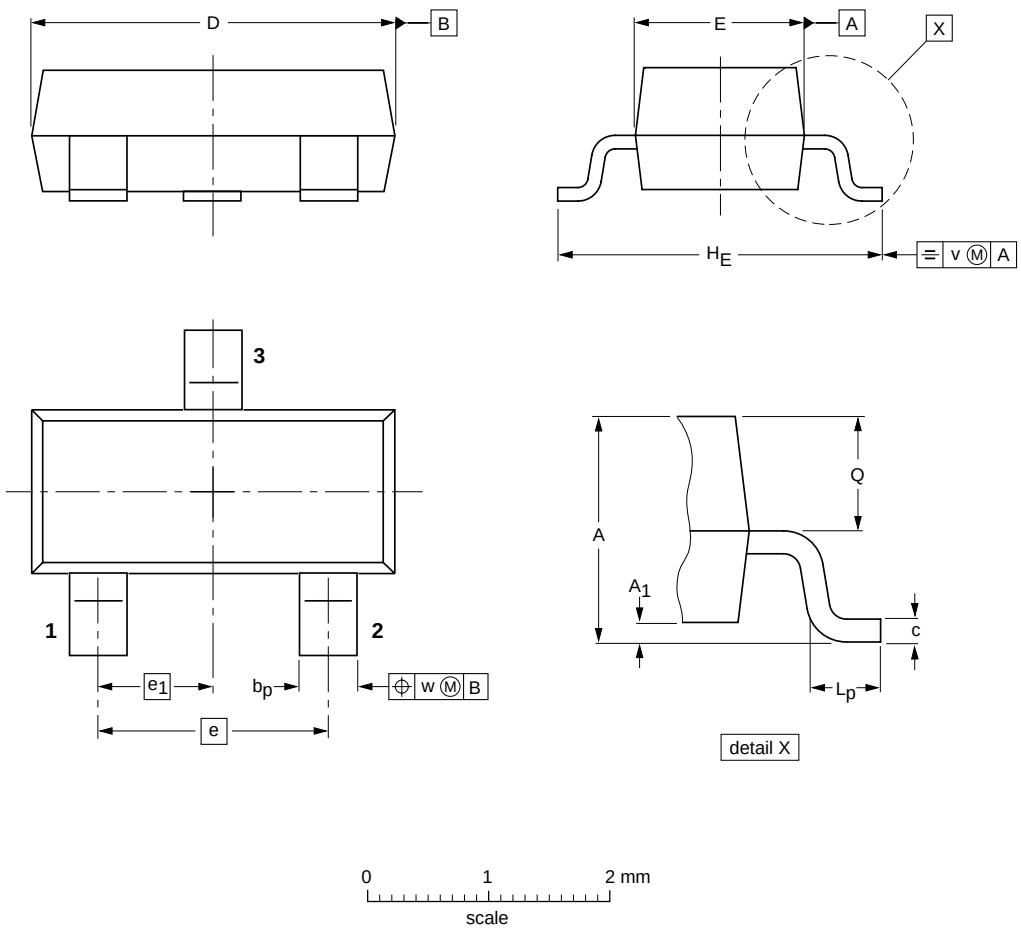
CHARACTERISTICS

T_j = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I_{CBO}	collector cut-off current	I_E = 0 A; V_{CB} = 20 V	–	–	400	nA
		I_E = 0 A; V_{CB} = 20 V; T_j = 125 °C	–	–	30	μA
I_{EBO}	emitter cut-off current	I_C = 0 A; V_{EB} = 2 V	–	–	100	nA
h_{FE}	DC current gain	I_C = 10 mA; V_{CE} = 1 V	40	–	–	
C_{re}	feedback capacitance	I_C = 0 A; V_{CE} = 10 V; f = 1 MHz	–	1.6	2.2	pF
f_T	transition frequency	I_C = 10 mA; V_{CE} = 10 V; f = 100 MHz	500	–	–	MHz
		I_C = 40 mA; V_{CE} = 10 V; f = 100 MHz	490	–	–	MHz

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	JEITA			
SOT23		TO-236AB				~~04-11-04~~ 06-03-16

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.
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NXP Semiconductors

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

For additional information please visit: **http://www.nxp.com**
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