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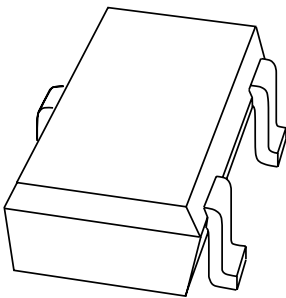
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If you have any questions related to the data sheet, please contact our nearest sales office via e-mail or telephone (details via **salesaddresses@nexperia.com**). Thank you for your cooperation and understanding,

Kind regards,

Team Nexperia

DATA SHEET



BF824W

PNP medium frequency transistor

Product data sheet
Supersedes data of 1997 Jul 07

1999 Apr 15

PNP medium frequency transistor

BF824W

FEATURES

- Low current (max. 25 mA)
- Low voltage (max. 30 V).

APPLICATIONS

- RF stages in FM front-ends in common base configuration.

DESCRIPTION

PNP medium frequency transistor in a SOT323 plastic package.

MARKING

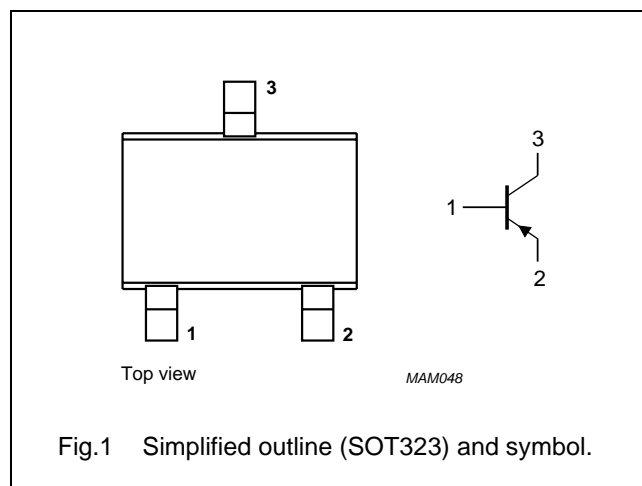
TYPE NUMBER	MARKING CODE ⁽¹⁾
BF824W	F8*

Note

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

PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	collector



LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CBO}	collector-base voltage	open emitter	–	–30	V
V_{CEO}	collector-emitter voltage	open base	–	–30	V
V_{EBO}	emitter-base voltage	open collector	–	–4	V
I_C	collector current (DC)		–	–25	mA
I_{CM}	peak collector current		–	–25	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25\text{ °C}$; 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

Note

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

PNP medium frequency transistor

BF824W

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	625	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.	MAX.	UNIT
I_{CBO}	collector cut-off current	$I_E = 0; V_{CB} = -30\text{ V}$	–	–50	nA
		$I_E = 0; V_{CB} = -30\text{ V}; T_j = 150\text{ °C}$	–	–10	μA
I_{EBO}	emitter cut-off current	$I_C = 0; V_{EB} = -4\text{ V}$	–	–100	nA
h_{FE}	DC current gain	$I_C = -1\text{ mA}; V_{CE} = -10\text{ V}$	25	–	
		$I_C = -4\text{ mA}; V_{CE} = -10\text{ V}$	25	–	
V_{BE}	base-emitter voltage	$I_C = -4\text{ mA}; V_{CE} = -10\text{ V}$	–	–900	mV
C_{rb}	feedback capacitance	$I_C = 0; V_{CE} = -10\text{ V}; f = 1\text{ MHz}$	–	0.3	pF
f_T	transition frequency	$V_{CE} = -10\text{ V}; f = 100\text{ MHz}; \text{note 1}$			
		$I_C = -1\text{ mA}$	250	–	MHz
		$I_C = -4\text{ mA}$	400	–	MHz
		$I_C = -8\text{ mA}$	390	–	MHz

Note

1. Pulse test: $t_p \leq 300\text{ }\mu\text{s}$; $\delta \leq 0.02$.

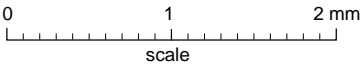
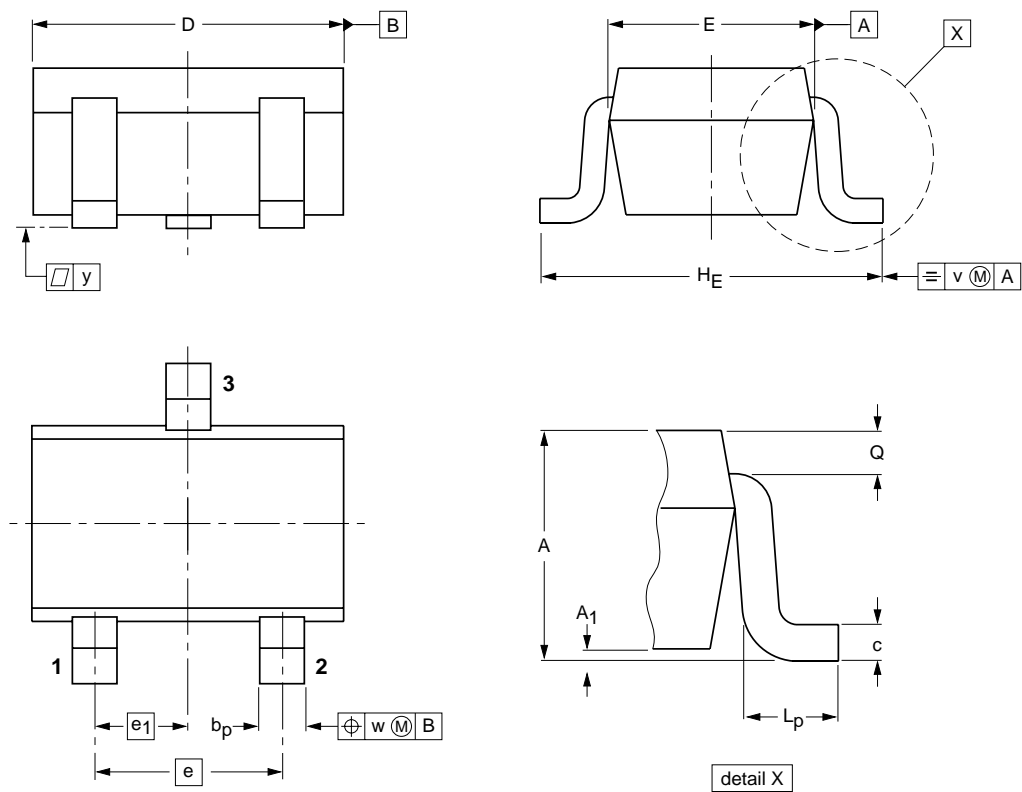
PNP medium frequency transistor

BF824W

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT323



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 0.8	0.1	0.4 0.3	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.23 0.13	0.2	0.2

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT323			SC-70			97-02-28

PNP medium frequency transistor**BF824W****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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NXP Semiconductors

Customer notification

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Contact information

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

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