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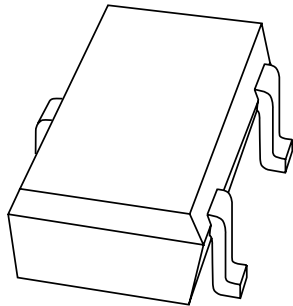
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Kind regards,

Team Nexperia

# DATA SHEET



## **PMST6428; PMST6429** NPN general purpose transistors

Product data sheet  
Supersedes data of 1997 Jun 12

1999 Apr 22

## NPN general purpose transistors

## PMST6428; PMST6429

## FEATURES

- Low current (max. 100 mA)
- Low voltage (max. 50 V).

## APPLICATIONS

- General purpose switching and amplification in e.g. telephony and professional communication equipment.

## DESCRIPTION

NPN transistor in an SC-70; SOT323 plastic package.

## MARKING

TYPE NUMBER	MARKING CODE <sup>(1)</sup>
PMST6428	*1K
PMST6429	*1L

## Note

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

## PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	collector

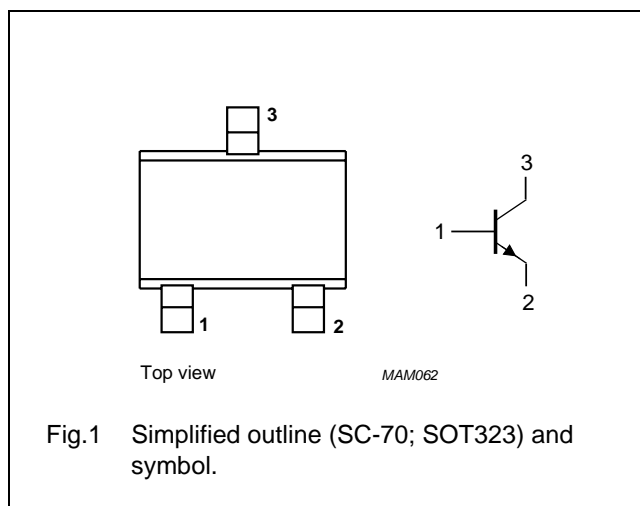


Fig.1 Simplified outline (SC-70; SOT323) and symbol.

## 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			
	PMST6428		—	60	V
	PMST6429		—	55	V
$V_{CEO}$	collector-emitter voltage	open base			
	PMST6428		—	50	V
	PMST6429		—	45	V
$V_{EBO}$	emitter-base voltage	open collector	—	6	V
$I_C$	collector current (DC)		—	100	mA
$I_{CM}$	peak collector current		—	200	mA
$I_{BM}$	peak base current		—	100	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.

## NPN general purpose transistors

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## 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

$T_{amb} \leq 25\text{ °C}$  unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$I_{CBO}$	collector cut-off current	$I_E = 0$ ; $V_{CB} = 30\text{ V}$	–	10	nA
		$I_E = 0$ ; $V_{CB} = 30\text{ V}$ ; $T_j = 150\text{ °C}$	–	10	$\mu\text{A}$
$I_{EBO}$	emitter cut-off current	$I_C = 0$ ; $V_{EB} = 5\text{ V}$	–	10	nA
$h_{FE}$	DC current gain PMST6428	$V_{CE} = 5\text{ V}$ $I_C = 0.01\text{ mA}$	250	–	
		$I_C = 0.1\text{ mA}$	250	650	
		$I_C = 1\text{ mA}$	250	–	
		$I_C = 10\text{ mA}$	250	–	
	DC current gain PMST6429	$V_{CE} = 5\text{ V}$ $I_C = 0.01\text{ mA}$	500	–	
		$I_C = 0.1\text{ mA}$	500	1250	
		$I_C = 1\text{ mA}$	500	–	
		$I_C = 10\text{ mA}$	500	–	
$V_{CEsat}$	collector-emitter saturation voltage	$I_C = 10\text{ mA}$ ; $I_B = 0.5\text{ mA}$ ; note 1	–	200	mV
		$I_C = 100\text{ mA}$ ; $I_B = 5\text{ mA}$ ; note 1	–	600	mV
$V_{BE}$	base-emitter voltage	$I_C = 1\text{ mA}$ ; $V_{CE} = 5\text{ V}$	560	660	mV
$C_c$	collector capacitance	$I_E = I_E = 0$ ; $V_{CB} = 10\text{ V}$ ; $f = 1\text{ MHz}$	–	3	pF
$C_e$	emitter capacitance	$I_C = I_C = 0$ ; $V_{EB} = 0.5\text{ V}$ ; $f = 1\text{ MHz}$	–	12	pF
$f_T$	transition frequency	$I_C = 1\text{ mA}$ ; $V_{CE} = 5\text{ V}$ ; $f = 100\text{ MHz}$	100	700	MHz

## Note

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

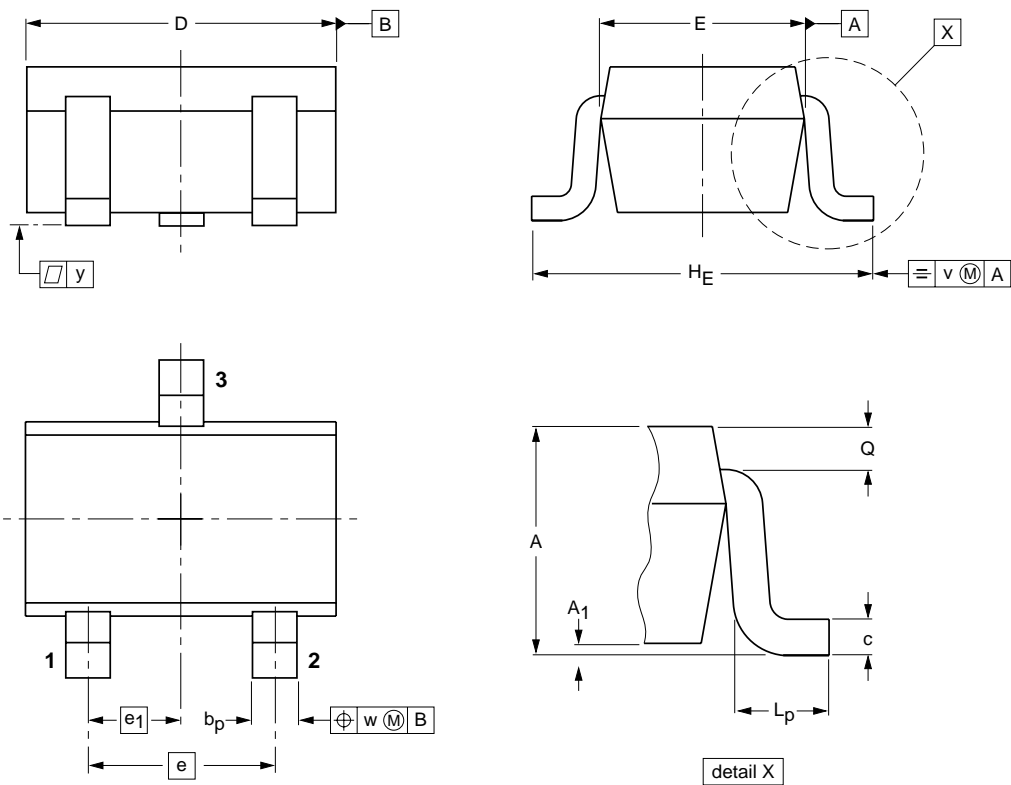
NPN general purpose transistors

PMST6428; PMST6429

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A <sub>1</sub> max	b <sub>p</sub>	c	D	E	e	e <sub>1</sub>	H <sub>E</sub>	L <sub>p</sub>	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

## NPN general purpose transistors

## PMST6428; PMST6429

## DATA SHEET STATUS

DOCUMENT STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)</sup>	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

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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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