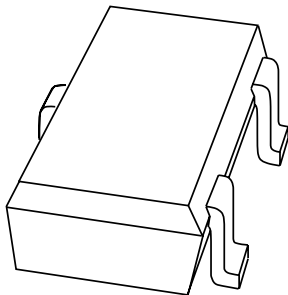


DATA SHEET



PMSTA05; PMSTA06 NPN general purpose transistors

Product data sheet
Supersedes data of 1997 Jun 16

1999 Apr 29

NPN general purpose transistors

PMSTA05; PMSTA06

FEATURES

- High current (max. 500 mA)
- Low voltage (max. 80 V).

APPLICATIONS

- Primarily intended for telephony and professional communication equipment.

DESCRIPTION

NPN transistor in a SOT323 plastic package.
PNP complements: PMSTA55 and PMSTA56.

MARKING

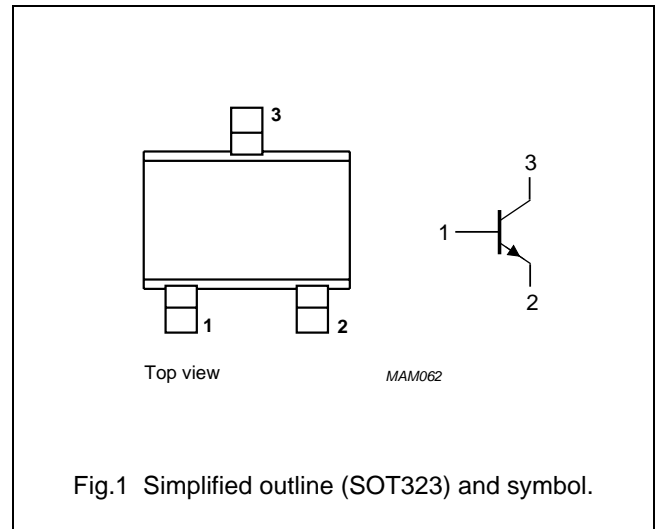
TYPE NUMBER	MARKING CODE ⁽¹⁾
PMSTA05	*1H
PMATA06	*1G

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			
	PMSTA05		–	60	V
	PMSTA06		–	80	V
V _{CEO}	collector-emitter voltage	open base			
	PMSTA05		–	60	V
	PMSTA06		–	80	V
V _{EBO}	emitter-base voltage	open collector	–	4	V
I _C	collector current (DC)		–	500	mA
I _{CM}	peak collector current		–	500	mA
I _{BM}	peak base current		–	500	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C	–	200	mW
T _{stg}	storage temperature		–65	+150	°C
T _j	junction temperature		–	150	°C
T _{amb}	operating ambient temperature		–65	+150	°C

NPN general purpose transistors

PMSTA05; PMSTA06

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				
	PMSTA05	$I_E = 0; V_{CB} = 60\text{ V}$	–	100	nA
	PMSTA06	$I_E = 0; V_{CB} = 80\text{ V}$	–	100	nA
I_{EBO}	emitter cut-off current	$I_C = 0; V_{EB} = 3\text{ V}$	–	500	nA
h_{FE}	DC current gain	$I_C = 10\text{ mA}; V_{CE} = 2\text{ V}$	50	–	
		$I_C = 100\text{ mA}; V_{CE} = 1\text{ V};$ note 1	50	–	
V_{CEsat}	collector-emitter saturation voltage	$I_C = 100\text{ mA}; I_B = 10\text{ mA};$ note 1	–	250	mV
V_{BEsat}	base-emitter saturation voltage	$I_C = 100\text{ mA}; I_B = 10\text{ mA};$ note 1	–	900	mV
V_{BE}	base-emitter voltage	$I_C = 100\text{ mA}; V_{CE} = 1\text{ V}$	–	1.2	V
f_T	transition frequency	$I_C = 10\text{ mA}; V_{CE} = 2\text{ V}; f = 100\text{ MHz}$	100	–	MHz

Note

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

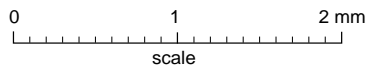
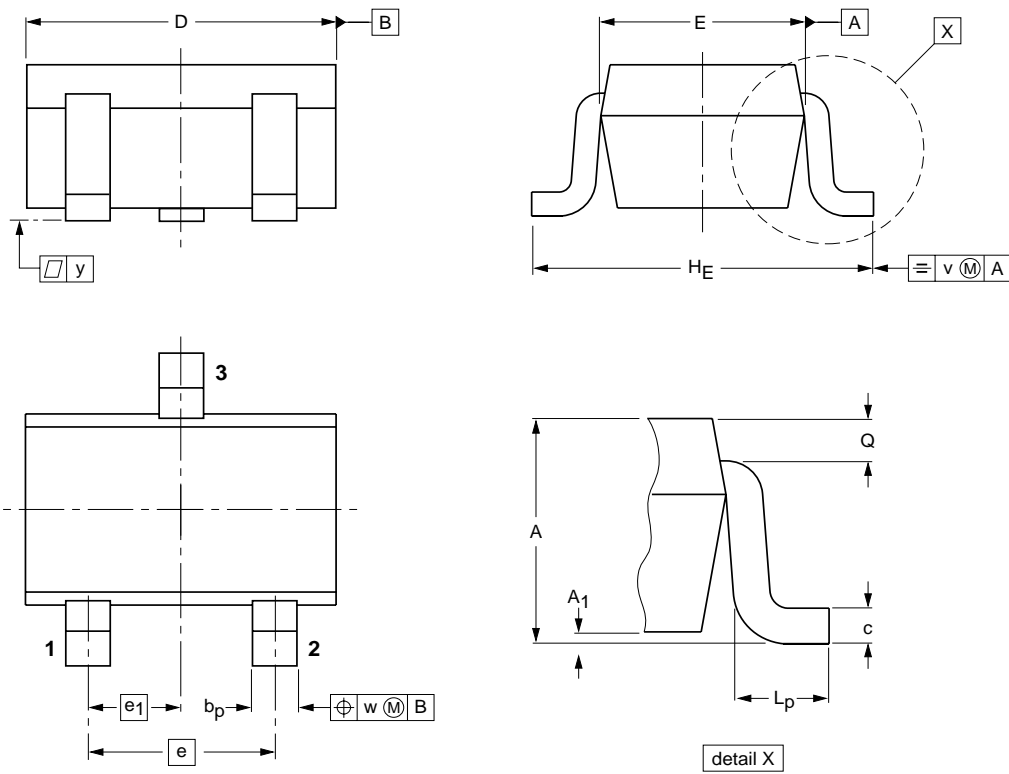
NPN general purpose transistors

PMSTA05; PMSTA06

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

NPN general purpose transistors

PMSTA05; PMSTA06

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

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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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Printed in The Netherlands

115002/00/02/pp6

Date of release: 1999 Apr 29

Document order number: 9397 750 05908

