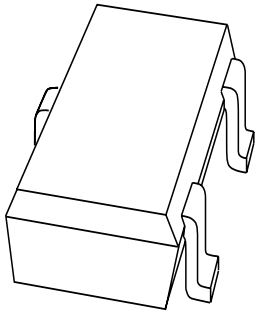
DATA SHEET



PMSTA92
PNP high-voltage transistor

Product data sheet
Supersedes data of 1999 Jun 01

2001 Feb 20

PNP high-voltage transistor PMSTA92

FEATURES

- S-mini package
- High voltage.

APPLICATIONS

- Primarily intended for use in telephony and professional communication equipment.

DESCRIPTION

PNP transistor in a microminiature (SMD) plastic package intended for surface mounted applications.

MARKING

TYPE NUMBER	MARKING CODE
PMSTA92	tD2

PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	collector

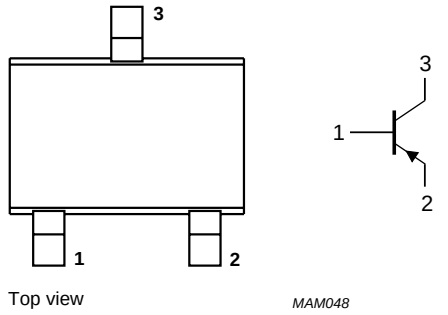


Fig.1 Simplified outline (SOT323) and symbol.

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	–	−300	V
V_{CEO}	collector-emitter voltage	open base	–	−300	V
V_{EBO}	emitter-base voltage	open collector	–	−5	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	$T_{amb} \leq 25$ °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. Refer to SOT323 (SC-70) standard mounting conditions.

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j\text{-}a}$	thermal resistance from junction to ambient	in free air; note 1	625	K/W

Note

1. Refer to SOT323 (SC-70) standard mounting conditions.

CHARACTERISTICS

T_{amb} = 25 °C; unless otherwise specified.

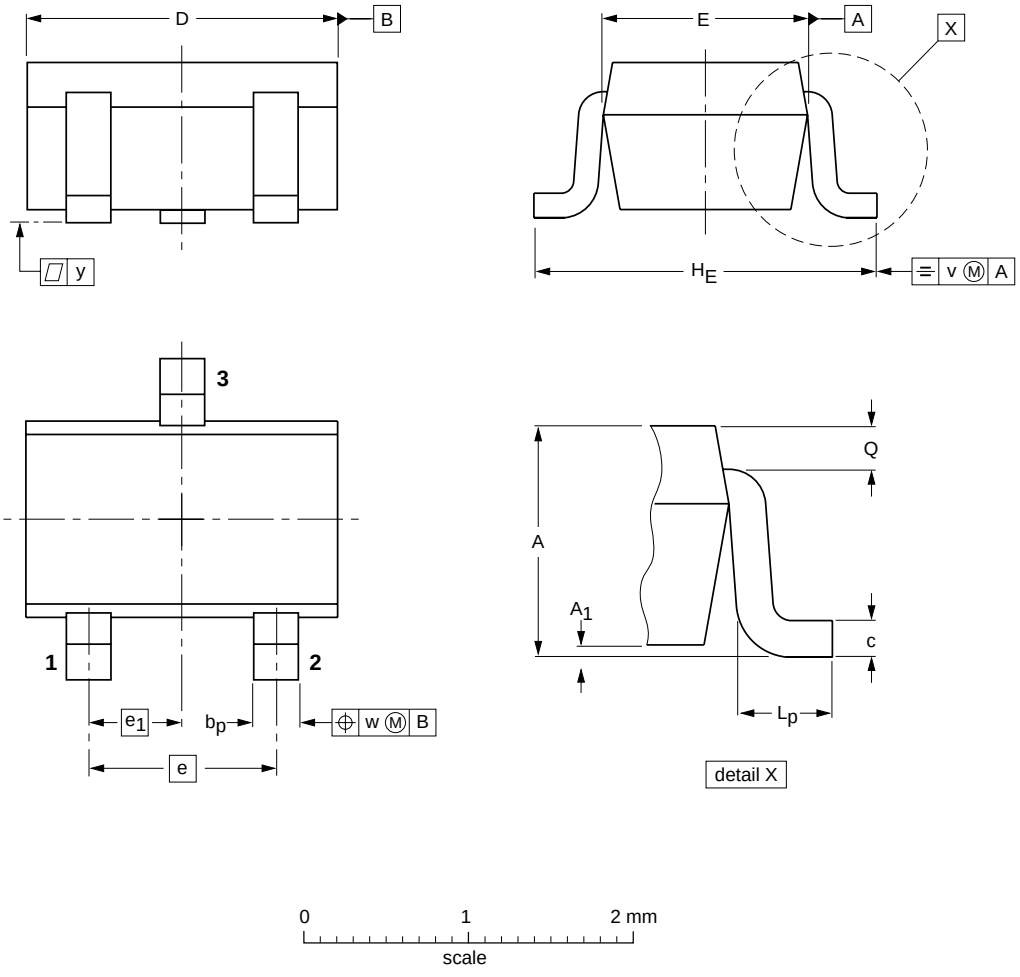
SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I_{CBO}	collector cut-off current	V_{CB} = −200 V; I_E = 0	−	−	−100	nA
I_{EBO}	emitter cut-off current	V_{BE} = −3 V; I_C = 0	−	−	−100	nA
h_{FE}	DC current gain	I_C = −1 mA; V_{CE} = −10 V	40	−	−	
		I_C = −10 mA; V_{CE} = −10 V	40	−	−	
		I_C = −30 mA; V_{CE} = −10 V	30	−	−	
V_{CEsat}	saturation voltage	I_C = −20 mA; I_B = −2 mA; note 1	−	−	−250	mV
V_{BEsat}	saturation voltage	I_C = −20 mA; I_B = −2 mA; note 1	−	−	−900	mV
C_c	collector-base capacitance	V_{CB} = −20 V; I_E = i_e = 0; f = 1 MHz	−	1.9	3.5	pF
C_e	emitter-base capacitance	V_{EB} = −5 V; I_C = i_c = 0; f = 1 MHz	−	20	−	pF
f_T	transition frequency	V_{CE} = −20 V; I_C = −10 mA; f = 100 MHz	50	−	−	MHz

Note

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

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

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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Customer notification

This data sheet was changed to reflect the new company name NXP Semiconductors. No changes were made to the content, except for the legal definitions and disclaimers.

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