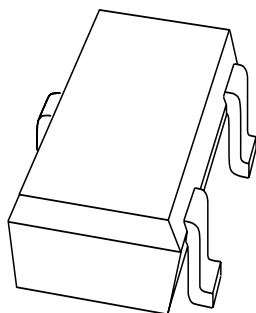


DATA SHEET



PMSTA92 PNP high-voltage transistor

Product specification
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

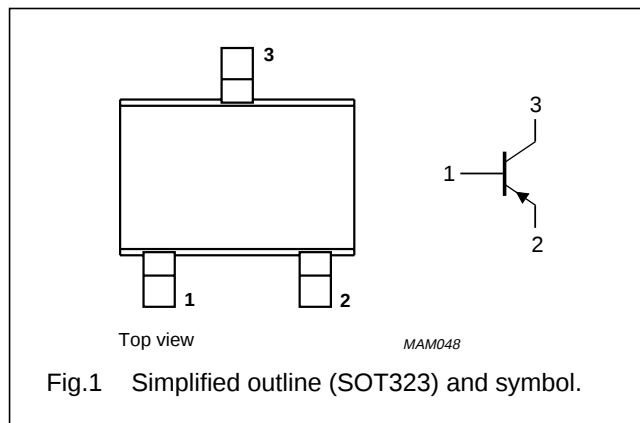
PNP transistor in a microminiature (SMD) plastic package intended for surface mounted applications.

MARKING

TYPE NUMBER	MARKING CODE
PMSTA92	tD2

PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	collector



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	$T_{amb} \leq 25\text{ °C}$; 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. Refer to SOT323 (SC-70) standard mounting conditions.

THERMAL CHARACTERISTICS

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

Note

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

PNP high-voltage transistor

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CHARACTERISTICS

$T_{\text{amb}} = 25\text{ }^{\circ}\text{C}$; unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I_{CBO}	collector cut-off current	$V_{\text{CB}} = -200\text{ V}$; $I_{\text{E}} = 0$	–	–	–100	nA
I_{EBO}	emitter cut-off current	$V_{\text{BE}} = -3\text{ V}$; $I_{\text{C}} = 0$	–	–	–100	nA
h_{FE}	DC current gain	$I_{\text{C}} = -1\text{ mA}$; $V_{\text{CE}} = -10\text{ V}$	40	–	–	
		$I_{\text{C}} = -10\text{ mA}$; $V_{\text{CE}} = -10\text{ V}$	40	–	–	
		$I_{\text{C}} = -30\text{ mA}$; $V_{\text{CE}} = -10\text{ V}$	30	–	–	
V_{CEsat}	saturation voltage	$I_{\text{C}} = -20\text{ mA}$; $I_{\text{B}} = -2\text{ mA}$; note 1	–	–	–250	mV
V_{BEsat}	saturation voltage	$I_{\text{C}} = -20\text{ mA}$; $I_{\text{B}} = -2\text{ mA}$; note 1	–	–	–900	mV
C_{c}	collector-base capacitance	$V_{\text{CB}} = -20\text{ V}$; $I_{\text{E}} = i_{\text{e}} = 0$; $f = 1\text{ MHz}$	–	1.9	3.5	pF
C_{e}	emitter-base capacitance	$V_{\text{EB}} = -5\text{ V}$; $I_{\text{C}} = i_{\text{c}} = 0$; $f = 1\text{ MHz}$	–	20	–	pF
f_{T}	transition frequency	$V_{\text{CE}} = -20\text{ V}$; $I_{\text{C}} = -10\text{ mA}$; $f = 100\text{ MHz}$	50	–	–	MHz

Note

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

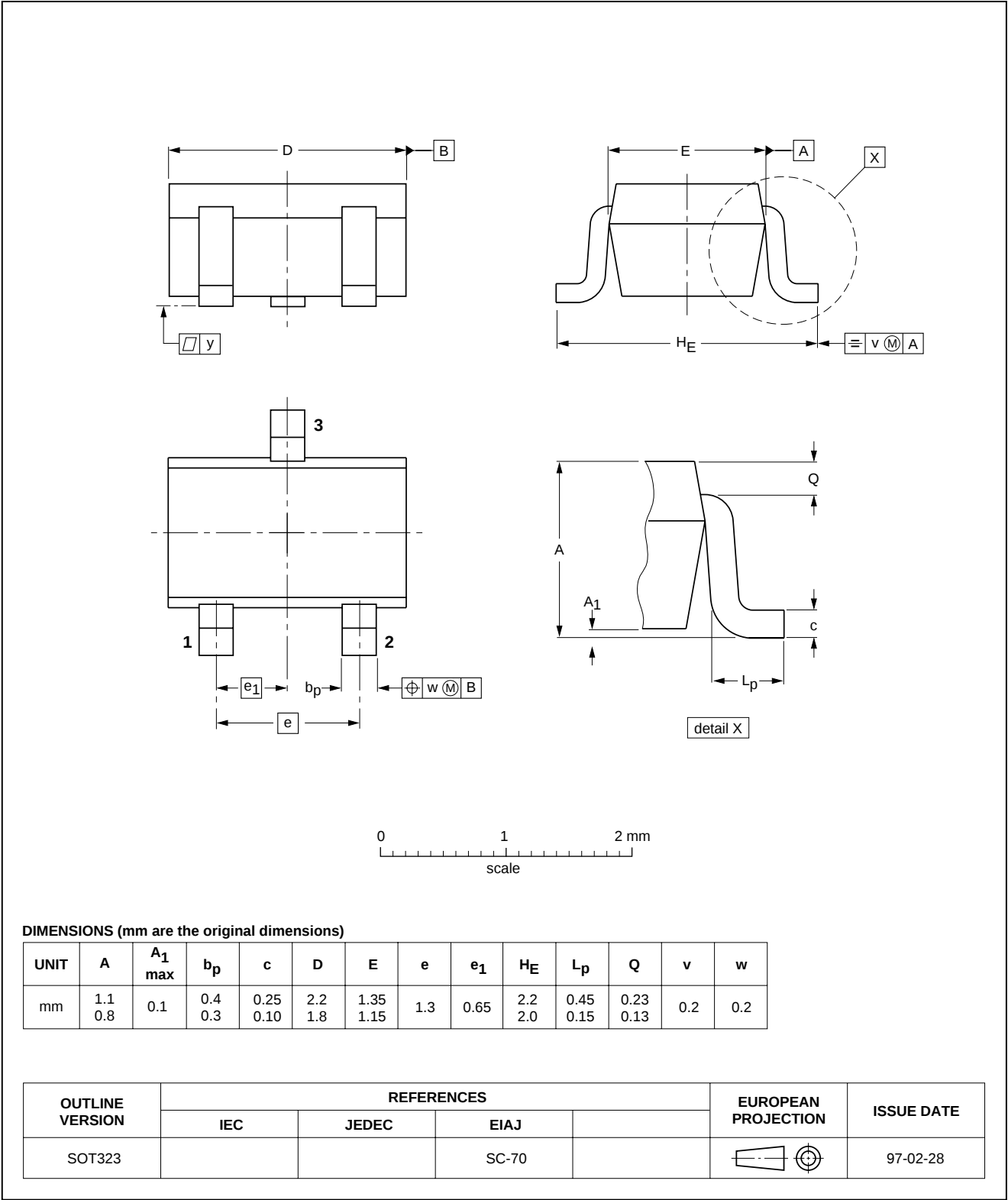
PNP high-voltage transistor

PMSTA92

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT323



PNP high-voltage transistor

PMSTA92

DATA SHEET STATUS

DATA SHEET STATUS	PRODUCT STATUS	DEFINITIONS ⁽¹⁾
Objective specification	Development	This data sheet contains the design target or goal specifications for product development. Specification may change in any manner without notice.
Preliminary specification	Qualification	This data sheet contains preliminary data, and supplementary data will be published at a later date. Philips Semiconductors reserves the right to make changes at any time without notice in order to improve design and supply the best possible product.
Product specification	Production	This data sheet contains final specifications. Philips Semiconductors reserves the right to make changes at any time without notice in order to improve design and supply the best possible product.

Note

1. Please consult the most recently issued data sheet before initiating or completing a design.

DEFINITIONS

Short-form specification — The data in a short-form specification is extracted from a full data sheet with the same type number and title. For detailed information see the relevant data sheet or data handbook.

Limiting values definition — Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 60134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.

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PNP high-voltage transistor

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NOTES

PNP high-voltage transistor

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NOTES

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