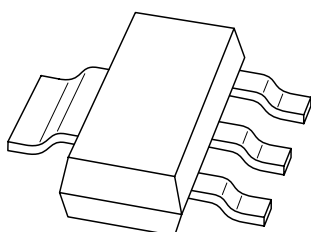


DATA SHEET



PZTA92 PNP high-voltage transistor

Product specification
Supersedes data of 1997 May 22

1999 Apr 14

PNP high-voltage transistor

PZTA92

FEATURES

- Low current (max. 100 mA)
- High voltage (max. 300 V).

APPLICATIONS

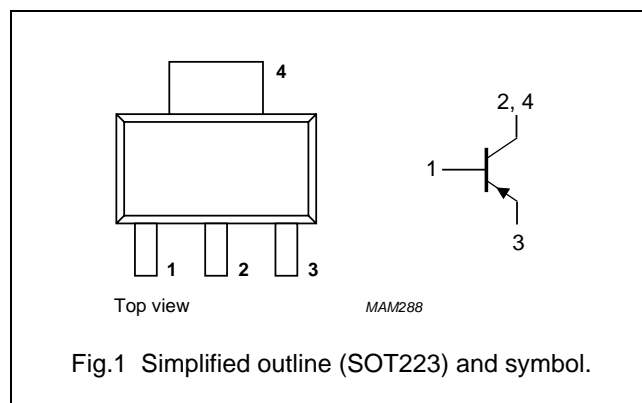
- Video equipment
- Telephony
- Professional communication equipment.

DESCRIPTION

PNP high-voltage transistor in a SOT223 plastic package.
NPN complement: PZTA42.

PINNING

PIN	DESCRIPTION
1	base
2, 4	collector
3	emitter



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	—	–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	—	1.2	W
T_{stg}	storage temperature		–65	+150	°C
T_j	junction temperature		—	150	°C
T_{amb}	operating ambient temperature		–65	+150	°C

Note

1. Device mounted on a printed-circuit board, single-sided copper, tinplated, mounting pad for collector 1 cm².
For other mounting conditions, see “*Thermal considerations for SOT223 in the General Part of associated Handbook*”.

PNP high-voltage transistor

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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	104	K/W
$R_{th\ j-s}$	thermal resistance from junction to soldering point		23	K/W

Note

1. Device mounted on a printed-circuit board, single-sided copper, tinplated, mounting pad for collector 1 cm².
For other mounting conditions, see "Thermal considerations for SOT223 in the General Part of associated Handbook".

CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I_{CBO}	collector cut-off current	$I_E = 0$; $V_{CB} = -200\text{ V}$	–	–20	nA
I_{EBO}	emitter cut-off current	$I_C = 0$; $V_{BE} = -5\text{ V}$	–	–100	nA
h_{FE}	DC current gain	$I_C = -1\text{ mA}$; $V_{CE} = -10\text{ V}$; note 1	25	–	
		$I_C = -10\text{ mA}$; $V_{CE} = -10\text{ V}$; note 1	40	–	
		$I_C = -30\text{ mA}$; $V_{CE} = -10\text{ V}$; note 1	25	–	
V_{CEsat}	collector-emitter saturation voltage	$I_C = -20\text{ mA}$; $I_B = -2\text{ mA}$	–	–500	mV
V_{BEsat}	base-emitter saturation voltage	$I_C = -20\text{ mA}$; $I_B = -2\text{ mA}$	–	–900	mV
C_c	collector capacitance	$I_E = 0$; $V_{CB} = -20\text{ V}$; $f = 1\text{ MHz}$	–	6	pF
f_T	transition frequency	$I_C = -10\text{ mA}$; $V_{CE} = -20\text{ V}$; $f = 100\text{ MHz}$	50	–	MHz

Note

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

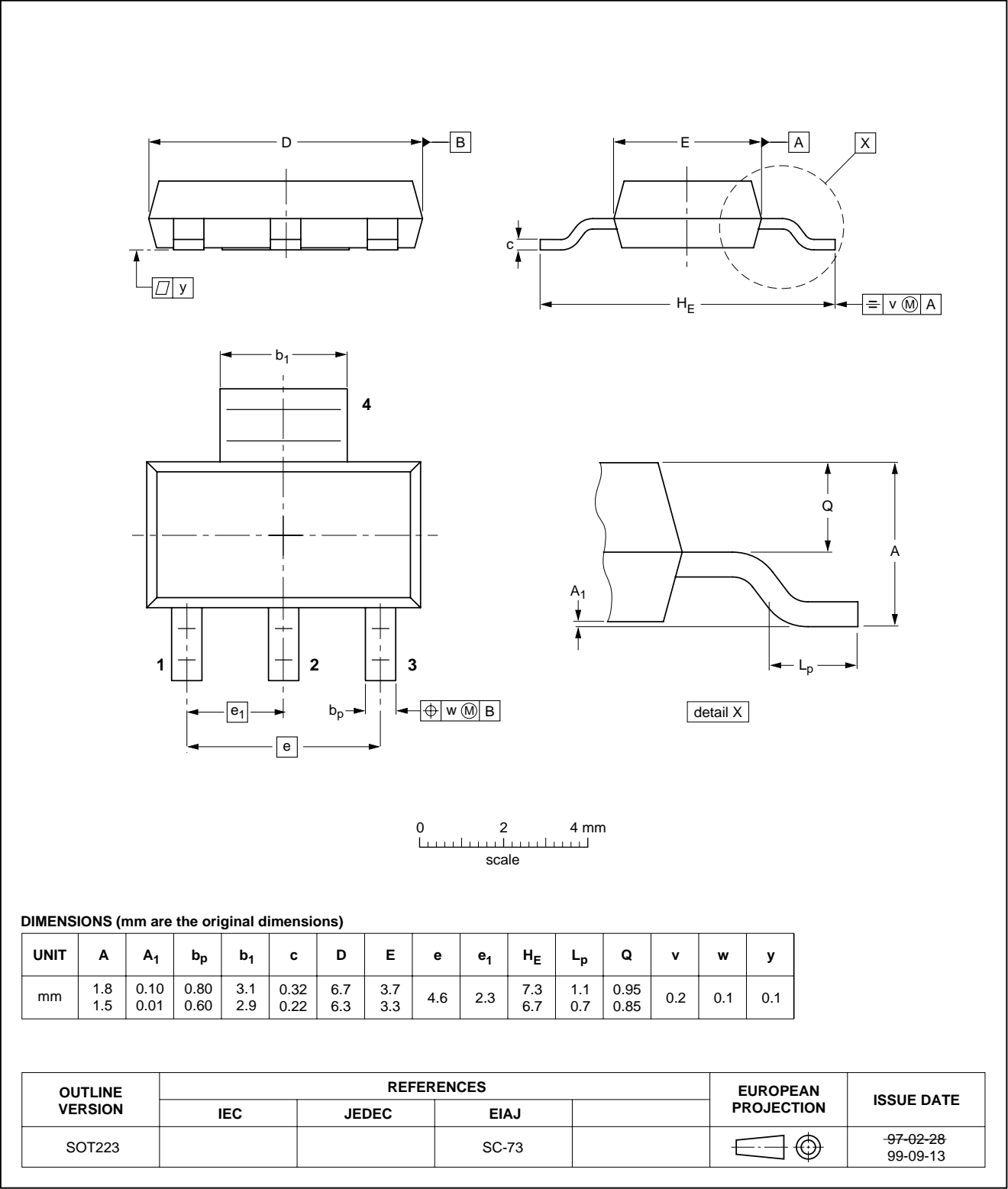
PNP high-voltage transistor

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PACKAGE OUTLINE

Plastic surface mounted package; collector pad for good heat transfer; 4 leads

SOT223



PNP high-voltage transistor

PZTA92

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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This data sheet was changed to reflect the new company name NXP Semiconductors, including new legal definitions and disclaimers. No changes were made to the technical content, except for package outline drawings which were updated to the latest version.

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