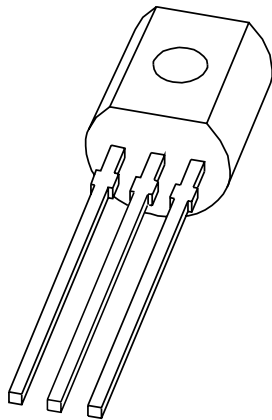


# DATA SHEET



## **MPSA92** PNP high-voltage transistor

Product data sheet  
Supersedes data of 2001 Dec 07

2004 Aug 20

# PNP high-voltage transistor

# MPSA92

### FEATURES

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

### APPLICATIONS

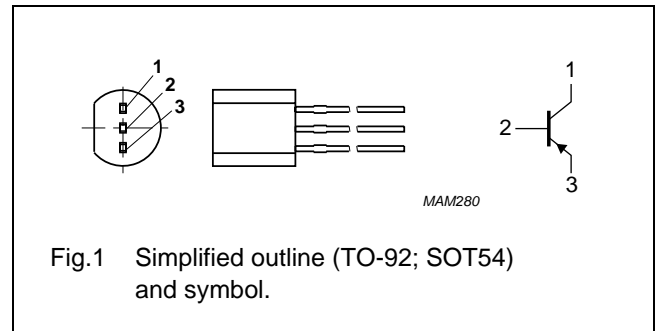
- General purpose switching and amplification.

### DESCRIPTION

PNP high-voltage transistor in a TO-92; SOT54 plastic package. NPN complement: MPSA42.

### PINNING

PIN	DESCRIPTION
1	collector
2	base
3	emitter



### 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	$T_{amb} \leq 25\text{ }^\circ\text{C}$	-	625	mW
$T_{stg}$	storage temperature		-65	+150	$^\circ\text{C}$
$T_j$	junction temperature		-	150	$^\circ\text{C}$
$T_{amb}$	operating ambient temperature		-65	+150	$^\circ\text{C}$

## PNP high-voltage transistor

## MPSA92

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	200	K/W

## Note

1. Transistor mounted on an FR4 printed-circuit board.

## CHARACTERISTICS

$T_j = 25\text{ °C}$  unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$I_{CBO}$	collector cut-off current	$I_E = 0; V_{CB} = -200\text{ V}$	–	–250	nA
$I_{EBO}$	emitter cut-off current	$I_C = 0; V_{BE} = -3\text{ V}$	–	–100	nA
$h_{FE}$	DC current gain	$V_{CE} = -10\text{ V}$ ; note 1 $I_C = -1\text{ mA}$ $I_C = -10\text{ mA}$ $I_C = -30\text{ mA}$	25 40 25	– – –	
$V_{CEsat}$	collector-emitter saturation voltage	$I_C = -20\text{ mA}; I_B = -2\text{ mA}$ ; note 1	–	–500	mV
$V_{BEsat}$	base-emitter saturation voltage	$I_C = -20\text{ mA}; I_B = -2\text{ mA}$ ; note 1	–	–900	mV
$C_c$	collector capacitance	$I_E = i_e = 0; V_{CB} = -20\text{ V}; f = 1\text{ MHz}$	–	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:  $t_p \leq 300\text{ }\mu\text{s}$ ;  $\delta \leq 0.02$ .

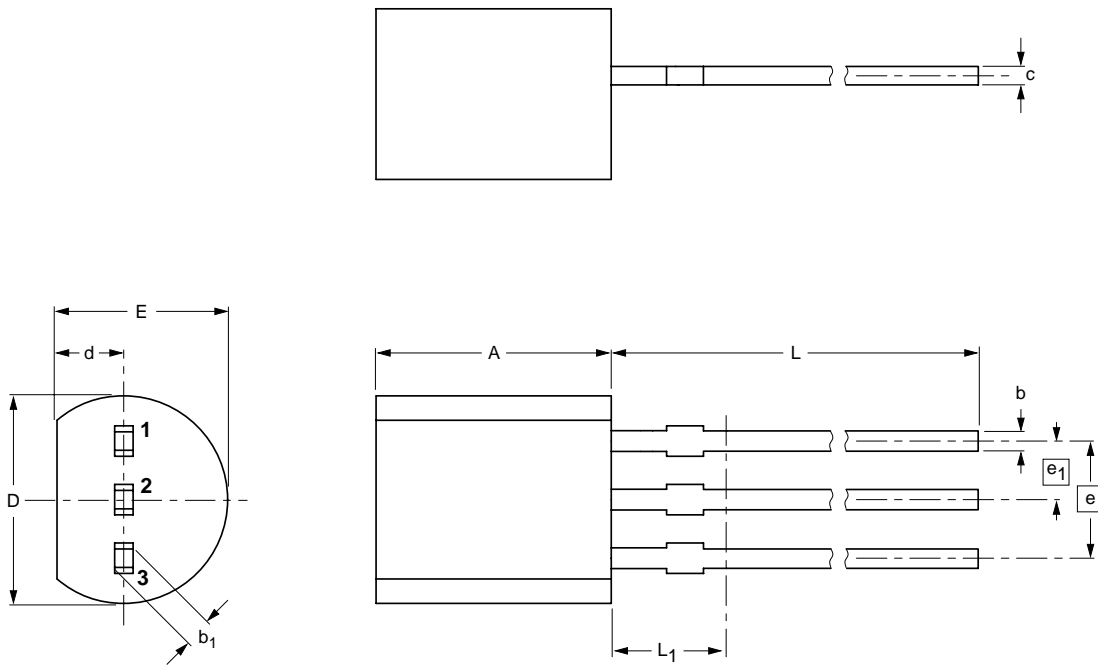
PNP high-voltage transistor

MPSA92

PACKAGE OUTLINE

Plastic single-ended leaded (through hole) package; 3 leads

SOT54



DIMENSIONS (mm are the original dimensions)

UNIT	A	b	b <sub>1</sub>	c	D	d	E	e	e <sub>1</sub>	L	L <sub>1</sub> <sup>(1)</sup> max.
mm	5.2 5.0	0.48 0.40	0.66 0.55	0.45 0.38	4.8 4.4	1.7 1.4	4.2 3.6	2.54	1.27	14.5 12.7	2.5

Note

1. Terminal dimensions within this zone are uncontrolled to allow for flow of plastic and terminal irregularities.

OUTLINE VERSION	REFERENCES			EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	JEITA		
SOT54		TO-92	SC-43A		04-06-28 04-11-16

PNP high-voltage transistor

MPSA92

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.

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## **Customer notification**

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.

## **Contact information**

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