

DATA SHEET



MPSA92 PNP high-voltage transistor

Product specification
Supersedes data of 1999 Apr 27

2001 Dec 07

PNP high-voltage transistor

MPSA92

FEATURES

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

APPLICATIONS

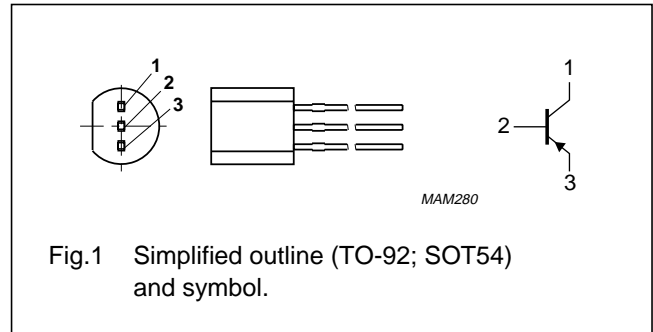
- General purpose switching and amplification.

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	$^\circ\text{C}$

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

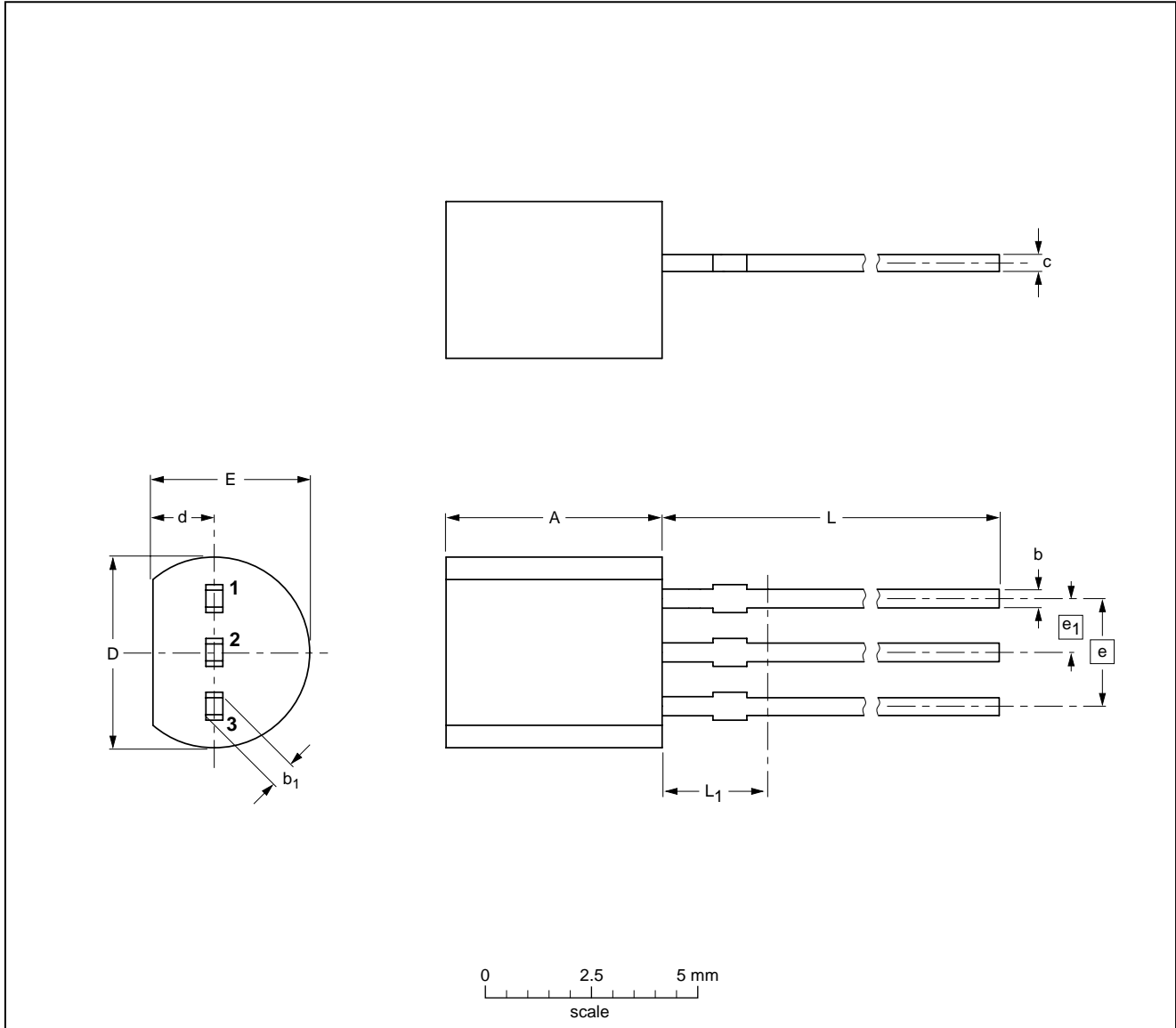
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PACKAGE OUTLINE

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

SOT54



DIMENSIONS (mm are the original dimensions)

UNIT	A	b	b ₁	c	D	d	E	e	e ₁	L	L ₁ ⁽¹⁾
mm	5.2 5.0	0.48 0.40	0.66 0.56	0.45 0.40	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	EIAJ		
SOT54		TO-92	SC-43		97-02-28

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DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITIONS
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NOTES

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NOTES

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