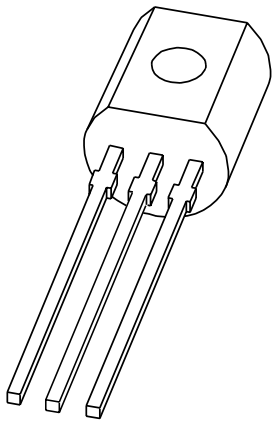
DATA SHEET



MPSA92
PNP high-voltage transistor

Product specification
Supersedes data of 1999 Apr 27

2001 Dec 07

Philips
Semiconductors

PHILIPS

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

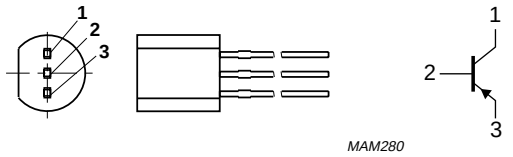


Fig.1 Simplified outline (TO-92; SOT54) and symbol.

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	–	625	mW
T_{stg}	storage temperature		–65	+150	°C
T_j	junction temperature		–	150	°C
T_{amb}	operating ambient temperature		–65	+150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j\text{-}a}$	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 °C unless otherwise specified.

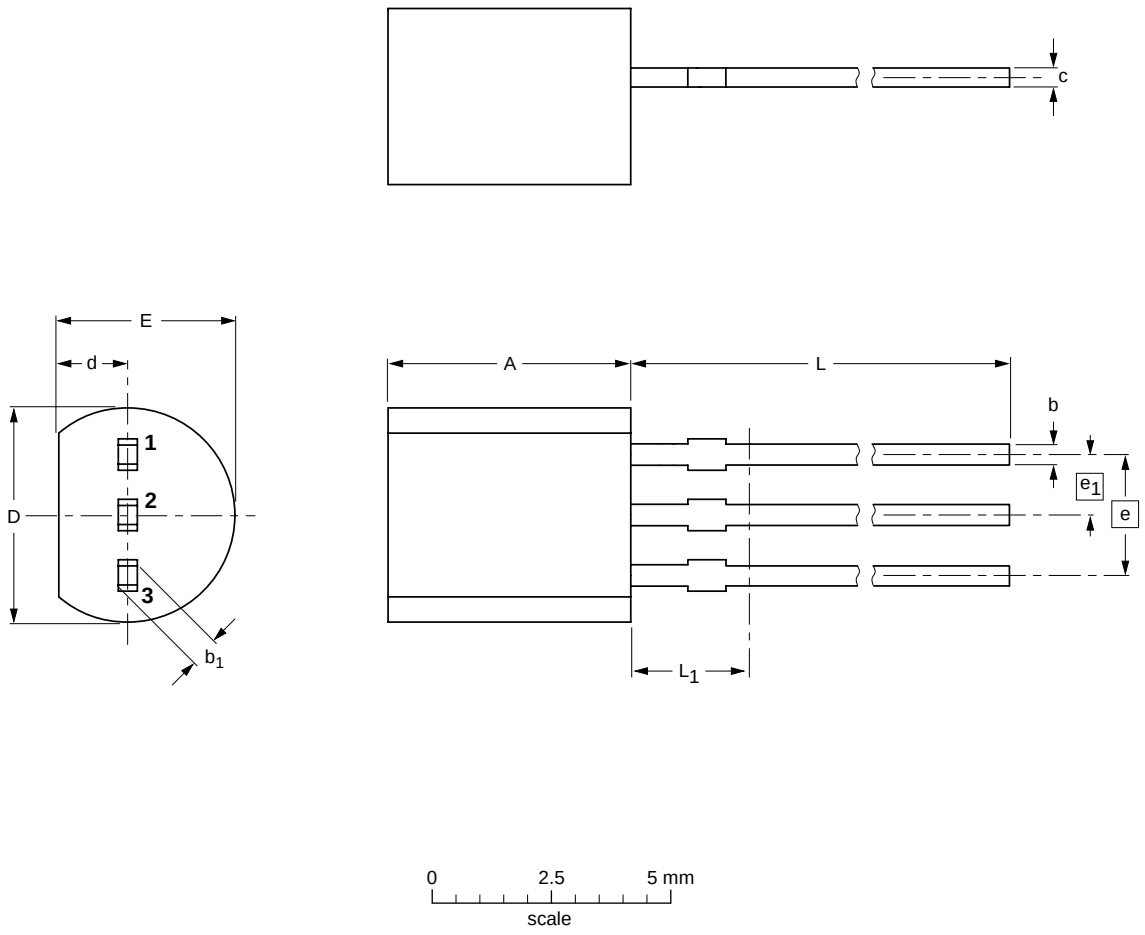
SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I_{CBO}	collector cut-off current	I_E = 0; V_{CB} = –200 V	–	–250	nA
I_{EBO}	emitter cut-off current	I_C = 0; V_{BE} = –3 V	–	–100	nA
h_{FE}	DC current gain	V_{CE} = –10 V; note 1			
		I_C = –1 mA	25	–	
		I_C = –10 mA	40	–	
		I_C = –30 mA	25	–	
V_{CEsat}	collector-emitter saturation voltage	I_C = –20 mA; I_B = –2 mA; note 1	–	–500	mV
V_{BEsat}	base-emitter saturation voltage	I_C = –20 mA; I_B = –2 mA; note 1	–	–900	mV
C_c	collector capacitance	$I_E = i_e$ = 0; V_{CB} = –20 V; f = 1 MHz	–	6	pF
f_T	transition frequency	I_C = –10 mA; V_{CE} = –20 V; f = 100 MHz	50	–	MHz

Note

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

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