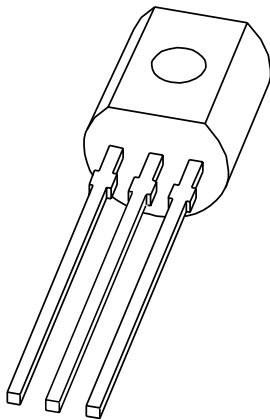


DATA SHEET



PSS9015B

PNP general purpose transistor

Product specification
Supersedes data of 2002 Sep 20

2004 Aug 10

PNP general purpose transistor

PSS9015B

FEATURES

- Low collector capacitance.

APPLICATIONS

- General purpose switching and amplification
- Low frequency, low noise amplifier.

DESCRIPTION

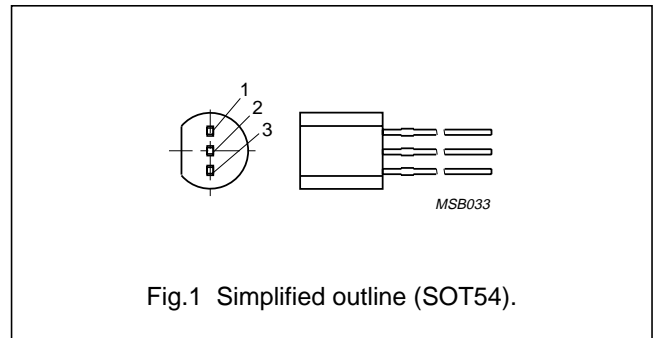
PNP transistor in a SOT54 plastic package.
NPN complement: PSS9014.

MARKING

TYPE NUMBER	MARKING CODE
PSS9015B	S9015B

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	–	–50	V
V_{CEO}	collector-emitter voltage	open base	–	–45	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		–	–200	mA
P_{tot}	total power dissipation	up to $T_{amb} = 25\text{ °C}$; note 1	–	500	mW
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; standard footprint.

PNP general purpose transistor

PSS9015B

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	in free air; note 1	240	K/W

Note

1. Device mounted on a printed-circuit board; single sided copper; tinplated; standard footprint.

CHARACTERISTICS

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

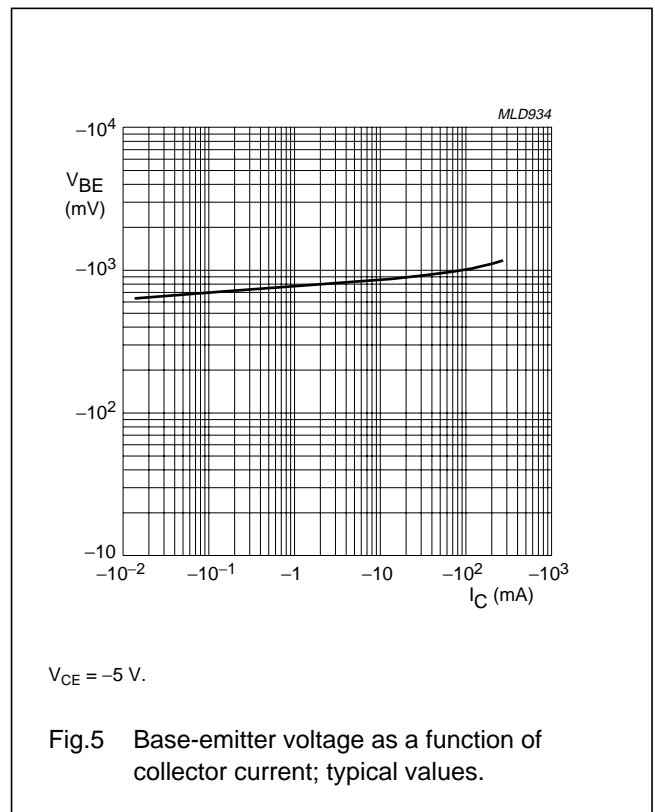
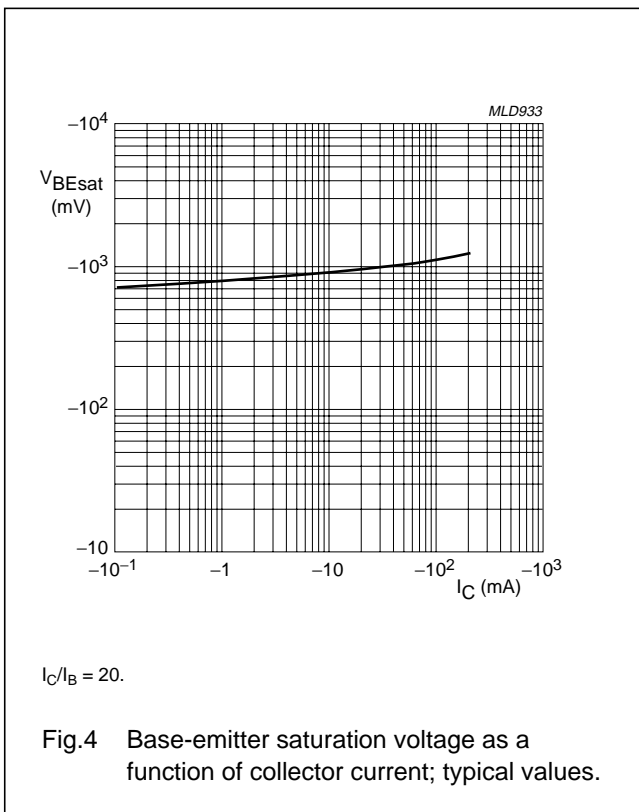
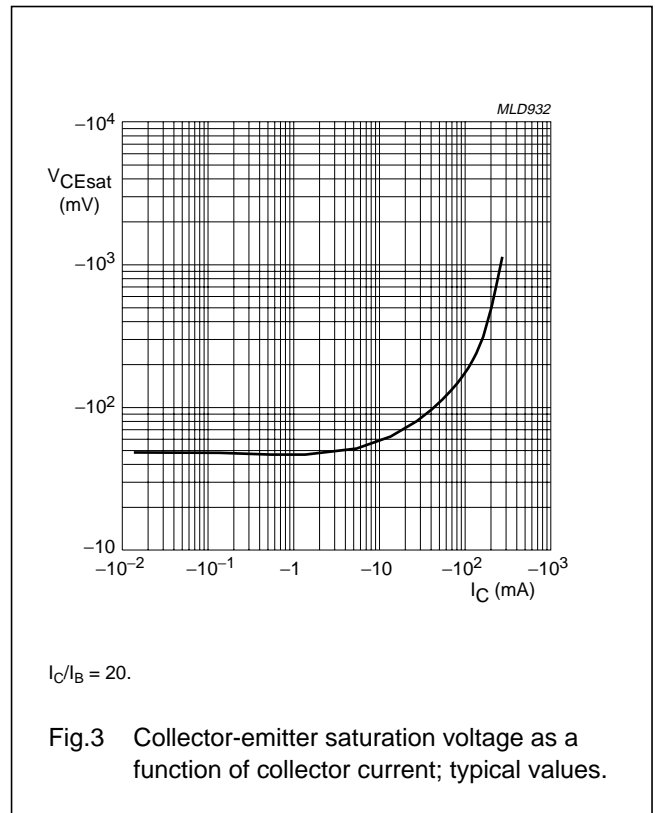
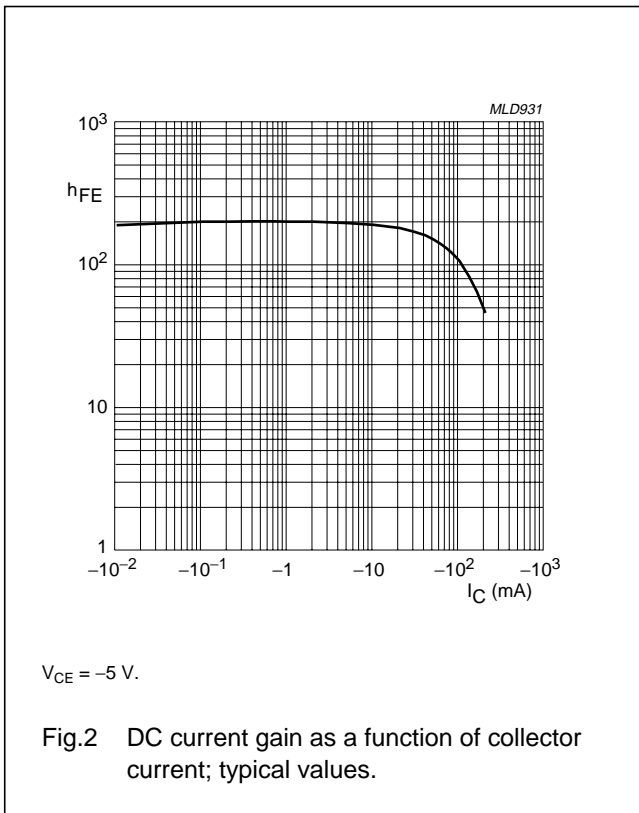
SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I_{CBO}	collector-base cut-off current	$V_{CB} = -30\text{ V}; I_E = 0$	–	–	–50	nA
		$V_{CB} = -30\text{ V}; I_E = 0;$ $T_{amb} = 150\text{ °C}$	–	–	–5	μA
I_{CEO}	collector-emitter cut-off current	$V_{CE} = -30\text{ V}; I_B = 0$	–	–	–100	nA
I_{EBO}	emitter-base cut-off current	$V_{EB} = -5\text{ V}; I_C = 0$	–	–	–100	nA
h_{FE}	DC current gain	$I_C = -1\text{ mA}; V_{CE} = -5\text{ V}$	100	200	300	
V_{CEsat}	saturation voltage	$I_C = -100\text{ mA}; I_B = -5\text{ mA};$ note 1	–	–	–700	mV
V_{BEsat}	saturation voltage	$I_C = -100\text{ mA}; I_B = -5\text{ mA};$ note 1	–	–	–1000	mV
V_{BEon}	base-emitter turn-on voltage	$I_C = -2\text{ mA}; V_{CE} = -5\text{ V}$	–600	–	–750	mV
f_T	transition frequency	$I_C = -10\text{ mA}; V_{CE} = -10\text{ V};$ $f = 100\text{ MHz}$	100	–	–	MHz
C_c	collector capacitance	$V_{CB} = -10\text{ V}; I_E = I_e = 0;$ $f = 1\text{ MHz}$	–	–	7	pF
F	noise figure	$V_{CE} = -5\text{ V}; I_C = -0.2\text{ mA};$ $R_S = 1\text{ k}\Omega; f = 1\text{ kHz}; B = 200\text{ Hz}$	–	–	10	dB

Note

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

PNP general purpose transistor

PSS9015B



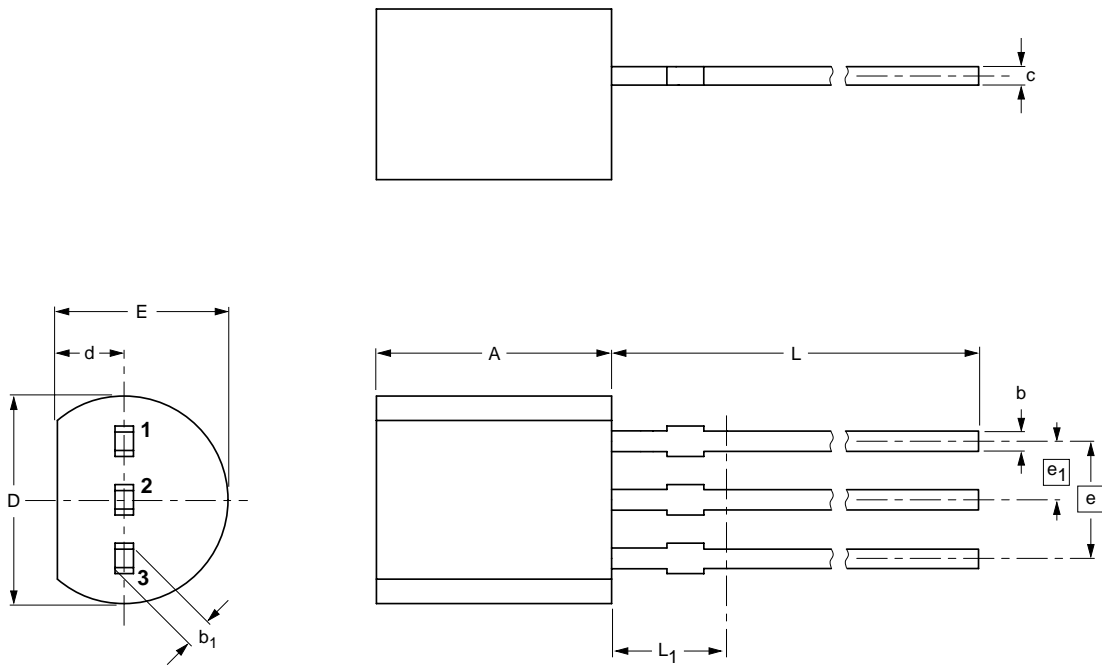
PNP general purpose transistor

PSS9015B

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⁾ 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		-97-02-28 04-06-28

PNP general purpose transistor

PSS9015B

DATA SHEET STATUS

LEVEL	DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾⁽³⁾	DEFINITION
I	Objective data	Development	This data sheet contains data from the objective specification for product development. Philips Semiconductors reserves the right to change the specification in any manner without notice.
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3. For data sheets describing multiple type numbers, the highest-level product status determines the data sheet status.

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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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