

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

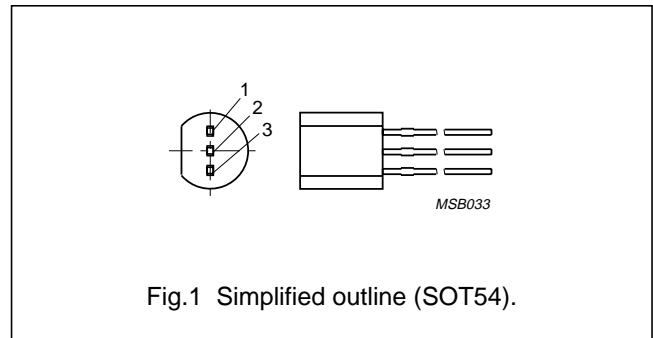
PNP transistor in a SOT54 plastic package.
NPN complement: PSS9014.

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.

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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.

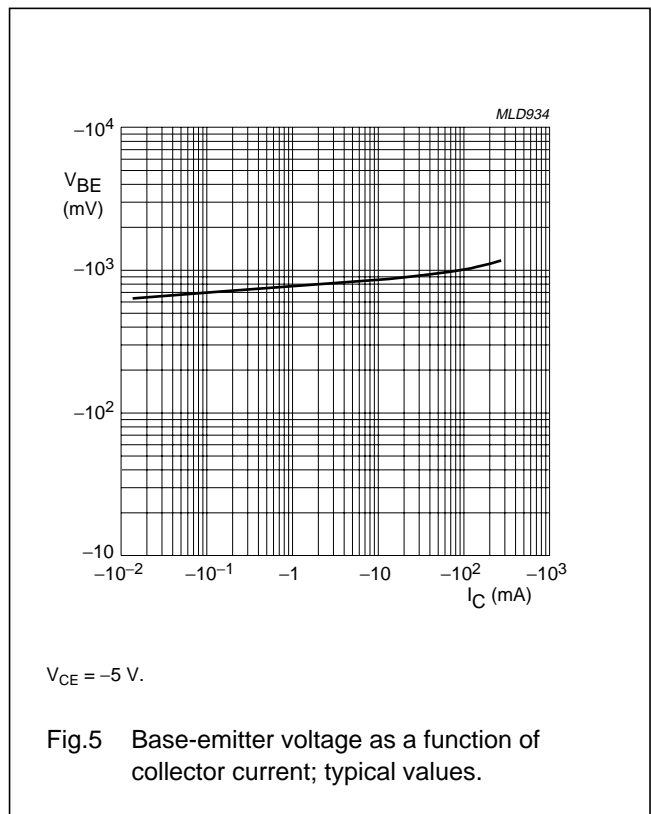
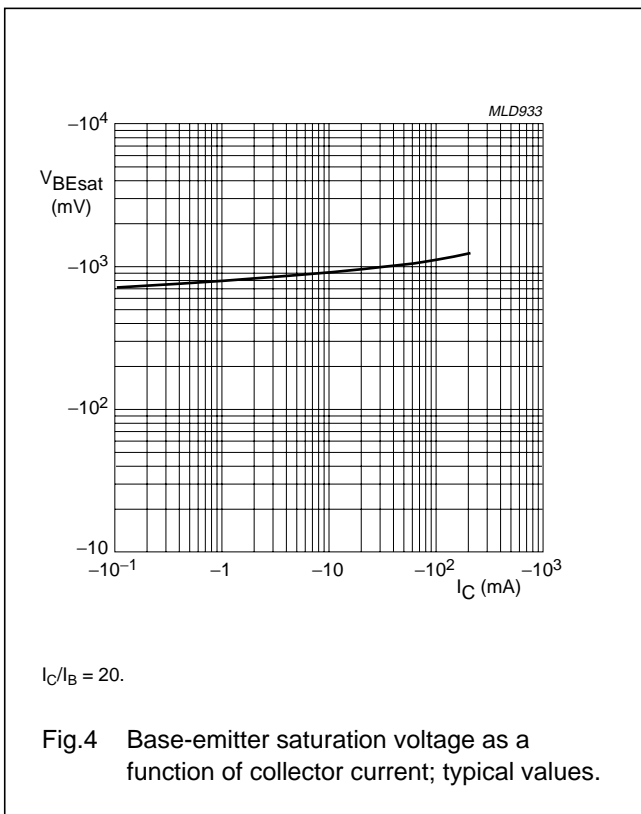
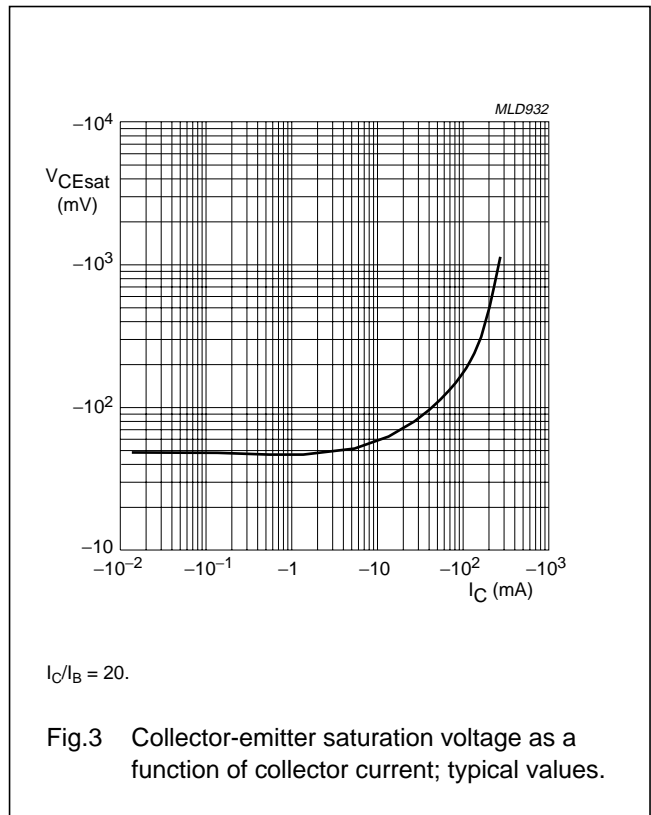
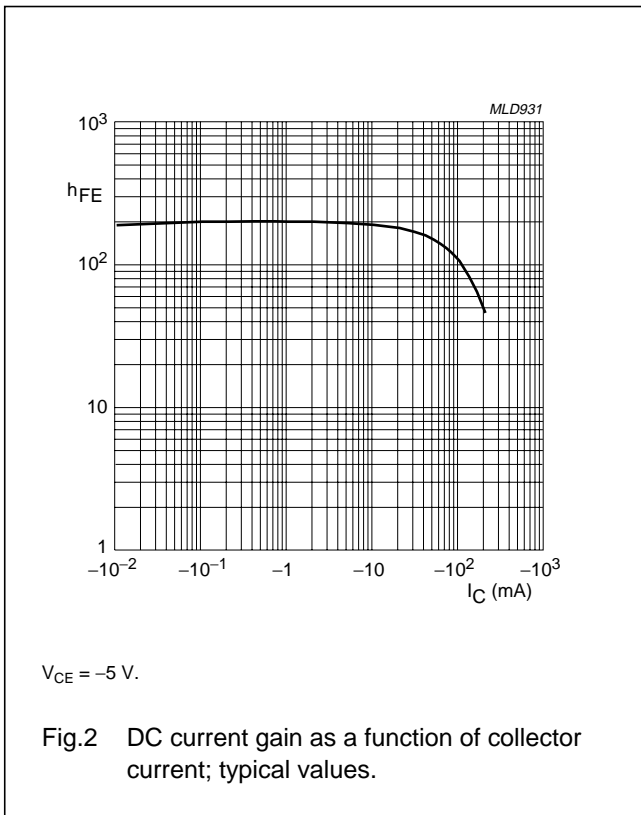
SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I_{CBO}	collector-base cut-off current	$V_{CB} = -30\text{ V}; I_E = 0$	–	–	–50	nA
		$V_{CB} = -30\text{ V}; I_E = 0;$ $T_{amb} = 150\text{ °C}$	–	–	–5	μA
I_{CEO}	collector-emitter cut-off current	$V_{CE} = -30\text{ V}; I_B = 0$	–	–	–100	nA
I_{EBO}	emitter-base 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: $t_p \leq 300\text{ }\mu\text{s}; \delta \leq 0.02$.

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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⁾ 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

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DATA SHEET STATUS

LEVEL	DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾⁽³⁾	DEFINITION
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