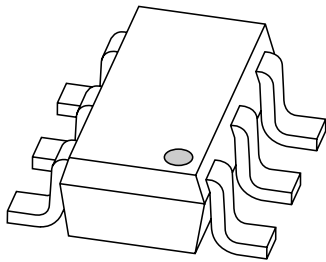


# DATA SHEET



## **PBSS5350D** PNP transistor

Product specification

2000 Mar 08

# PNP transistor

# PBSS5350D

### FEATURES

- High current capabilities
- Low  $V_{CEsat}$ .

### APPLICATIONS

- Heavy duty battery powered equipment (Automotive, Telecom and Audio/Video) such as motor and lamp drivers
- $V_{CEsat}$  critical applications such as the latest low supply voltage IC applications
- All battery driven equipment to save battery power.

### DESCRIPTION

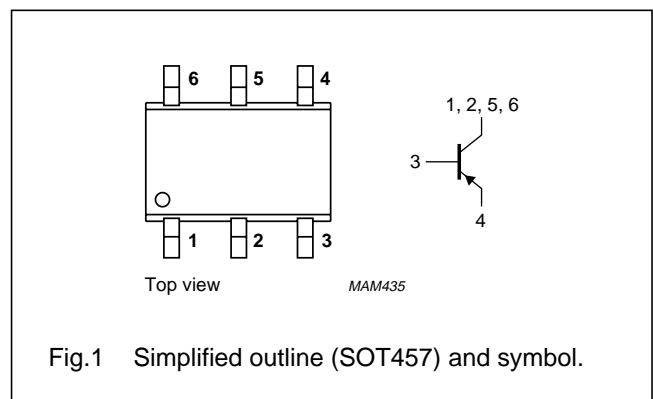
PNP low  $V_{CEsat}$  transistor in a SC-74 plastic package.  
NPN complement: PBSS4350D.

### MARKING CODE

TYPE NUMBER	MARKING CODE
PBSS5350D	53

### PINNING

PIN	DESCRIPTION
1	collector
2	collector
3	base
4	emitter
5	collector
6	collector



### 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	–	–60	V
$V_{CEO}$	collector-emitter voltage	open base	–	–50	V
$V_{EBO}$	emitter-base voltage	open collector	–	–6	V
$I_C$	collector current (DC)		–	–3	A
$I_{CM}$	peak collector current		–	–5	A
$I_{BM}$	peak base current		–	–1	A
$P_{tot}$	total power dissipation	$T_{amb} \leq 25\text{ }^\circ\text{C}$ note 1 note 2	–	600 750	mW mW
$T_{stg}$	storage temperature		–65	+150	$^\circ\text{C}$
$T_j$	junction temperature		–	150	$^\circ\text{C}$
$T_{amb}$	ambient temperature		–65	+150	$^\circ\text{C}$

### Notes

1. Device mounted on a printed-circuit board, single-sided copper, tinplated, mounting pad for collector 1 cm<sup>2</sup>.
2. Device mounted on a printed-circuit board, single-sided copper, tinplated, mounting pad for collector 6 cm<sup>2</sup>.

## PNP transistor

## PBSS5350D

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	in free air;		
		note 1	208	K/W
		note 2	160	K/W

## Notes

- Device mounted on a printed-circuit board, single-sided copper, tinplated, mounting pad for collector 1 cm<sup>2</sup>.
- Device mounted on a printed-circuit board, single-sided copper, tinplated, mounting pad for collector 6 cm<sup>2</sup>.

## CHARACTERISTICS

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

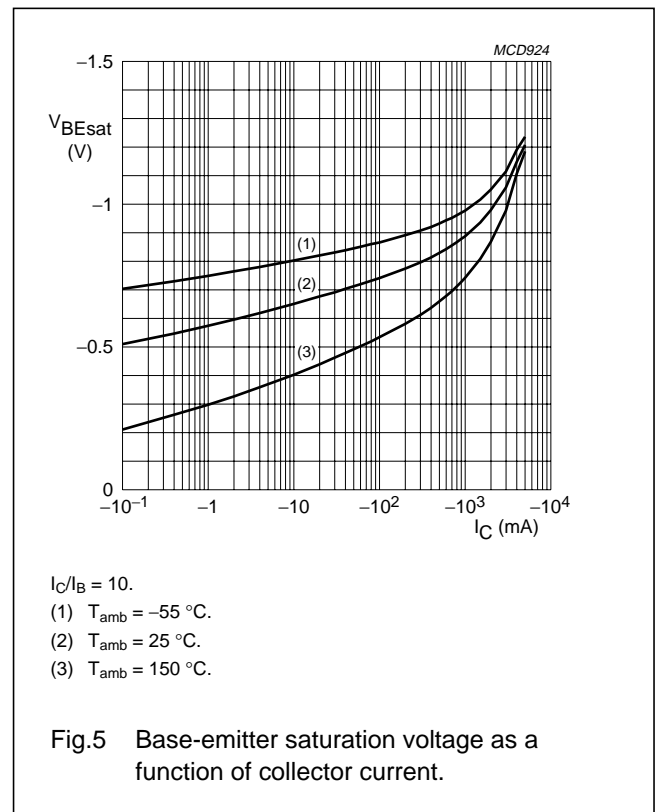
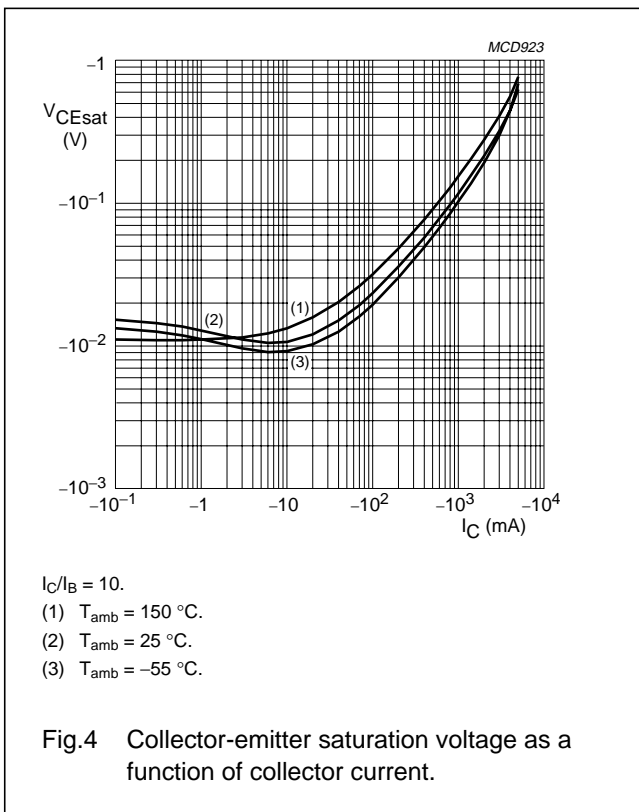
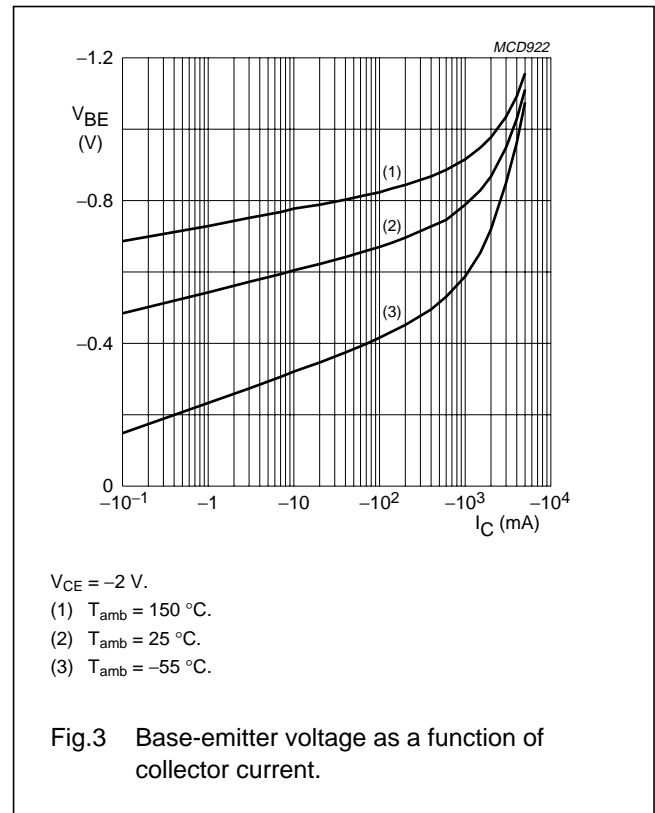
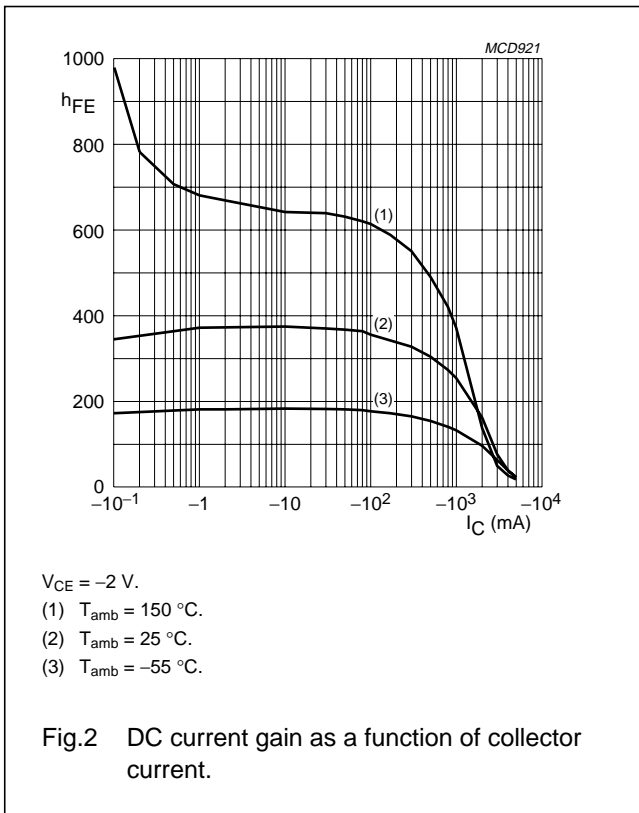
SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$I_{CBO}$	collector cut-off current	$I_E = 0; V_{CB} = -50\text{ V}$	–	–100	nA
		$I_E = 0; V_{CB} = -50\text{ V}; T_j = 150\text{ °C}$	–	–50	μA
$I_{EBO}$	emitter cut-off current	$I_C = 0; V_{EB} = -5\text{ V}$	–	–100	nA
$h_{FE}$	DC current gain	$V_{CE} = -2\text{ V};$ $I_C = -500\text{ mA}$	200	–	
		$I_C = -1\text{ A};$ note 1	200	–	
		$I_C = -2\text{ A};$ note 1	100	–	
$V_{CEsat}$	collector-emitter saturation voltage	$I_C = -500\text{ mA}; I_B = -50\text{ mA}$	–	–100	mV
		$I_C = -1\text{ A}; I_B = -50\text{ mA}$	–	–180	mV
		$I_C = -2\text{ A}; I_B = -200\text{ mA};$ note 1	–	–300	mV
$V_{BEsat}$	base-emitter saturation voltage	$I_C = -2\text{ A}; I_B = -200\text{ mA};$ note 1	–	–1.2	V
$V_{BEon}$	base-emitter turn-on voltage	$I_C = -1\text{ A}; V_{CE} = -2\text{ V};$ note 1	–	–1.1	V
$C_c$	collector capacitance	$I_E = I_e = 0; V_{CB} = -10\text{ V};$ $f = 1\text{ MHz}$	–	40	pF
$f_T$	transition frequency	$I_C = -100\text{ mA}; V_{CE} = -5\text{ V};$ $f = 100\text{ MHz}$	100	–	MHz

## Note

- Pulse test  $t_p \leq 300\text{ μs}$ ,  $\delta \leq 0.02$ .

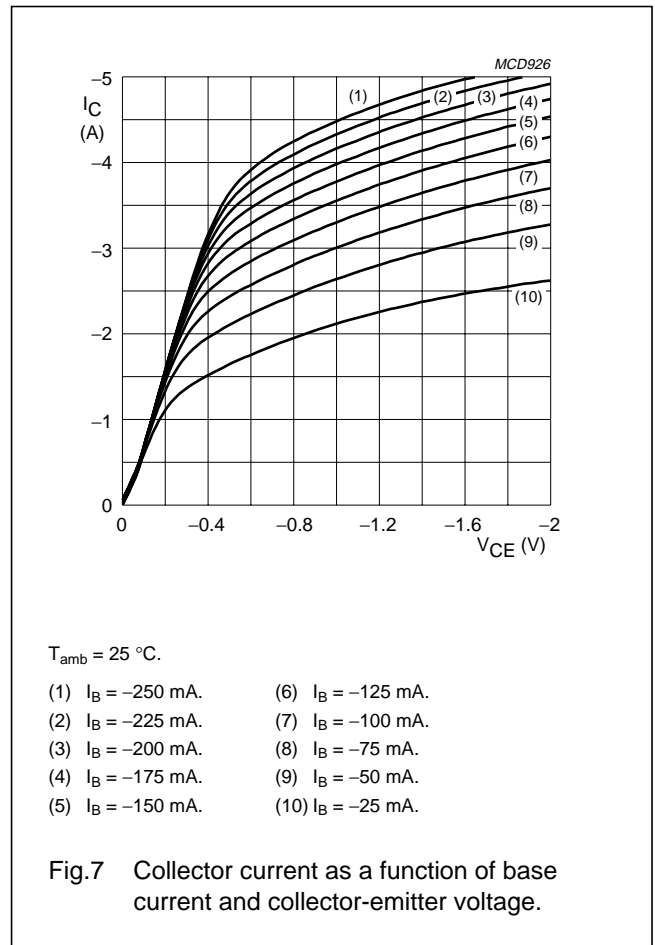
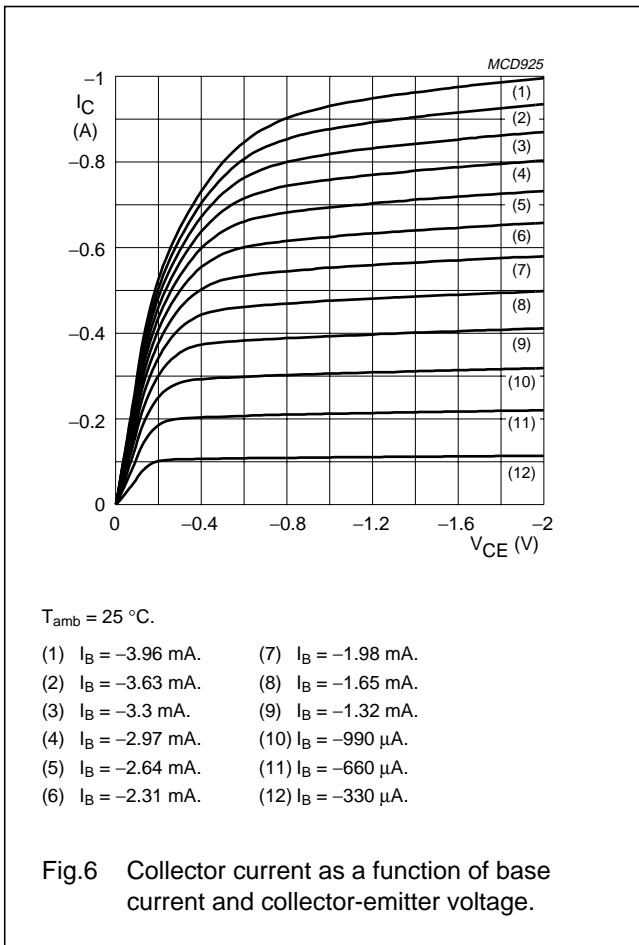
PNP transistor

PBSS5350D



PNP transistor

PBSS5350D



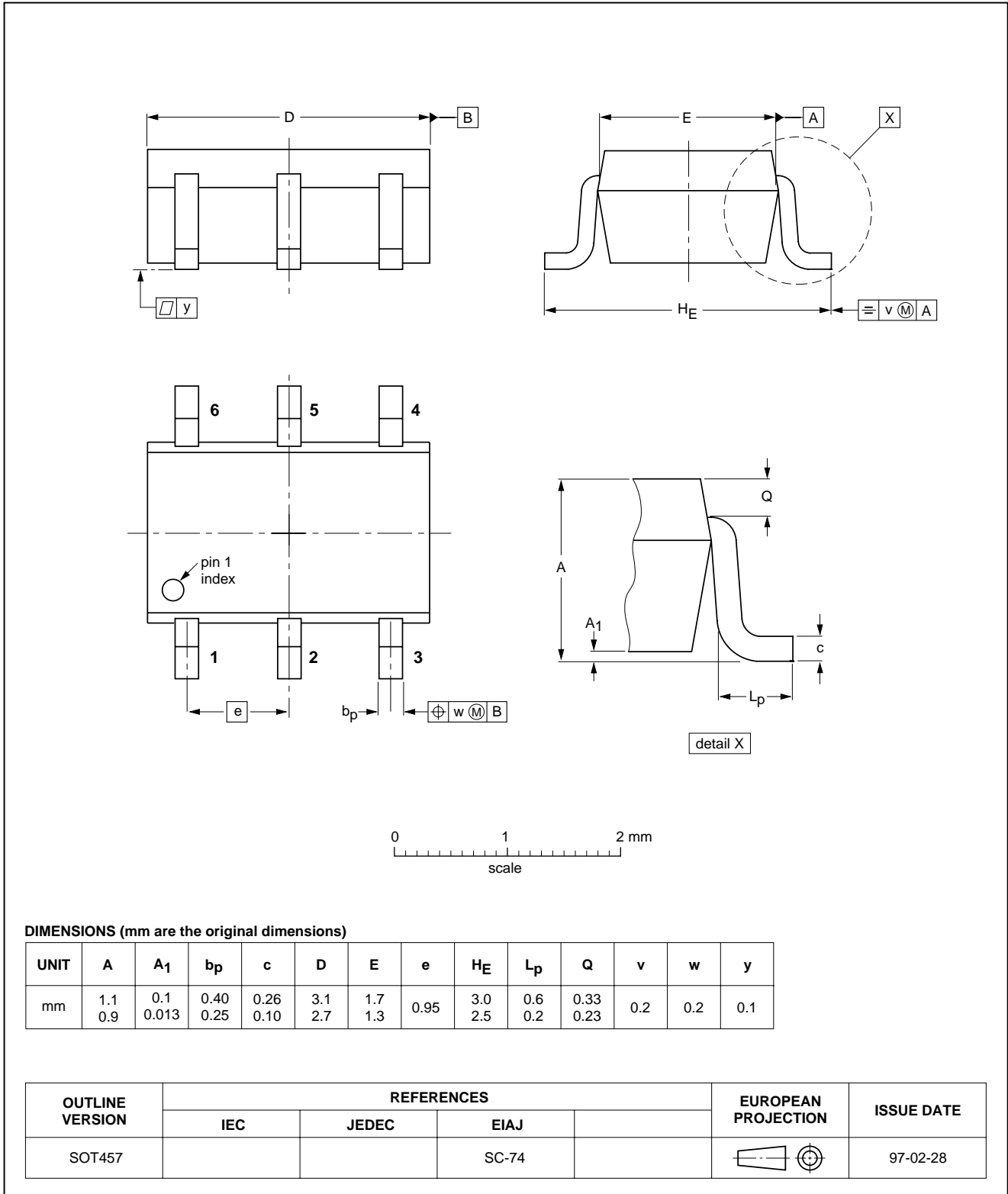
PNP transistor

PBSS5350D

PACKAGE OUTLINE

Plastic surface mounted package; 6 leads

SOT457



## PNP transistor

## PBSS5350D

**DEFINITIONS**

<b>Data sheet status</b>	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
<b>Limiting values</b>	
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.	
<b>Application information</b>	
Where application information is given, it is advisory and does not form part of the specification.	

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