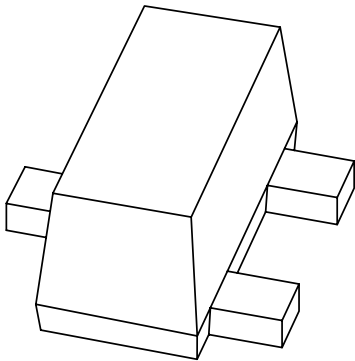


DATA SHEET



PBSS3540F

40 V low V_{CEsat} PNP transistor

Product specification

2001 Jul 13

40 V low V_{CEsat} PNP transistor

PBSS3540F

FEATURES

- Low collector-emitter saturation voltage
- High current capability
- Improved thermal behaviour due to flat leads
- Enhanced performance over SOT23 general purpose transistors.

APPLICATIONS

- General purpose switching and muting
- Low frequency driver circuits
- Audio frequency general purpose applications
- Battery driven equipment (mobile phones, video cameras, hand-held devices).

DESCRIPTION

PNP low V_{CEsat} transistor in a SC-89 (SOT490) plastic package.
 NPN complement: PBSS2540F.

MARKING

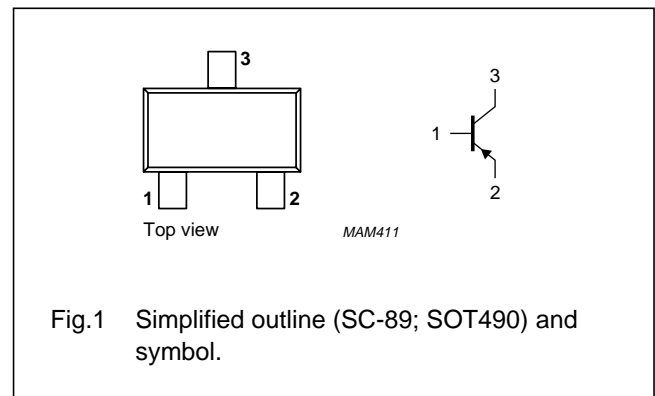
TYPE NUMBER	MARKING CODE
PBSS3540F	2D

QUICK REFERENCE DATA

SYMBOL	PARAMETER	MAX.	UNIT
V_{CEO}	collector-emitter voltage	-40	V
I_{CM}	peak collector current	-1	A
R_{CEsat}	equivalent on-resistance	<700	m Ω

PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	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	-	-40	V
V_{CEO}	collector-emitter voltage	open base	-	-40	V
V_{EBO}	emitter-base voltage	open collector	-	-6	V
I_C	collector current (DC)		-	-500	mA
I_{CM}	peak collector current		-	-1	A
I_{BM}	peak base current		-	-100	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25\text{ }^\circ\text{C}$	-	250	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	$^\circ\text{C}$

40 V low V_{CEsat} PNP transistor

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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	in free air	500	K/W

CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I_{CBO}	collector-base cut-off current	$V_{CB} = -40\text{ V}; I_E = 0$	–	–	–100	nA
		$V_{CB} = -40\text{ V}; I_E = 0; T_j = 150\text{ °C}$	–	–	–50	μA
I_{BEO}	emitter-base cut-off current	$V_{EB} = -5\text{ V}; I_C = 0$	–	–	–100	nA
h_{FE}	DC current gain	$V_{CE} = -2\text{ V}$				
		$I_C = -10\text{ mA}$	200	–	–	
		$I_C = -100\text{ mA}; \text{note 1}$	150	–	–	
		$I_C = -500\text{ mA}; \text{note 1}$	40	–	–	
V_{CEsat}	collector-emitter saturation voltage	$I_C = -10\text{ mA}; I_B = -0.5\text{ mA}$	–	–	–50	mV
		$I_C = -100\text{ mA}; I_B = -5\text{ mA}$	–	–	–130	mV
		$I_C = -200\text{ mA}; I_B = -10\text{ mA}$	–	–	–200	mV
		$I_C = -500\text{ mA}; I_B = -50\text{ mA}; \text{note 1}$	–	–	–350	mV
R_{CEsat}	equivalent on-resistance	$I_C = -500\text{ mA}; I_B = -50\text{ mA}; \text{note 1}$	–	440	<700	$\text{m}\Omega$
V_{BEsat}	base-emitter saturation voltage	$I_C = -500\text{ mA}; I_B = -50\text{ mA}; \text{note 1}$	–	–	–1.2	V
V_{BEon}	base-emitter turn-on voltage	$V_{CE} = -2\text{ V}; I_C = -100\text{ mA}; \text{note 1}$	–	–	–1.1	V
C_c	collector capacitance	$V_{CB} = -10\text{ V}; I_E = I_e = 0; f = 1\text{ MHz}$	–	–	10	pF
f_T	transition frequency	$I_C = -100\text{ mA}; V_{CE} = -5\text{ V}; f = 100\text{ MHz}$	100	300	–	MHz

Note

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

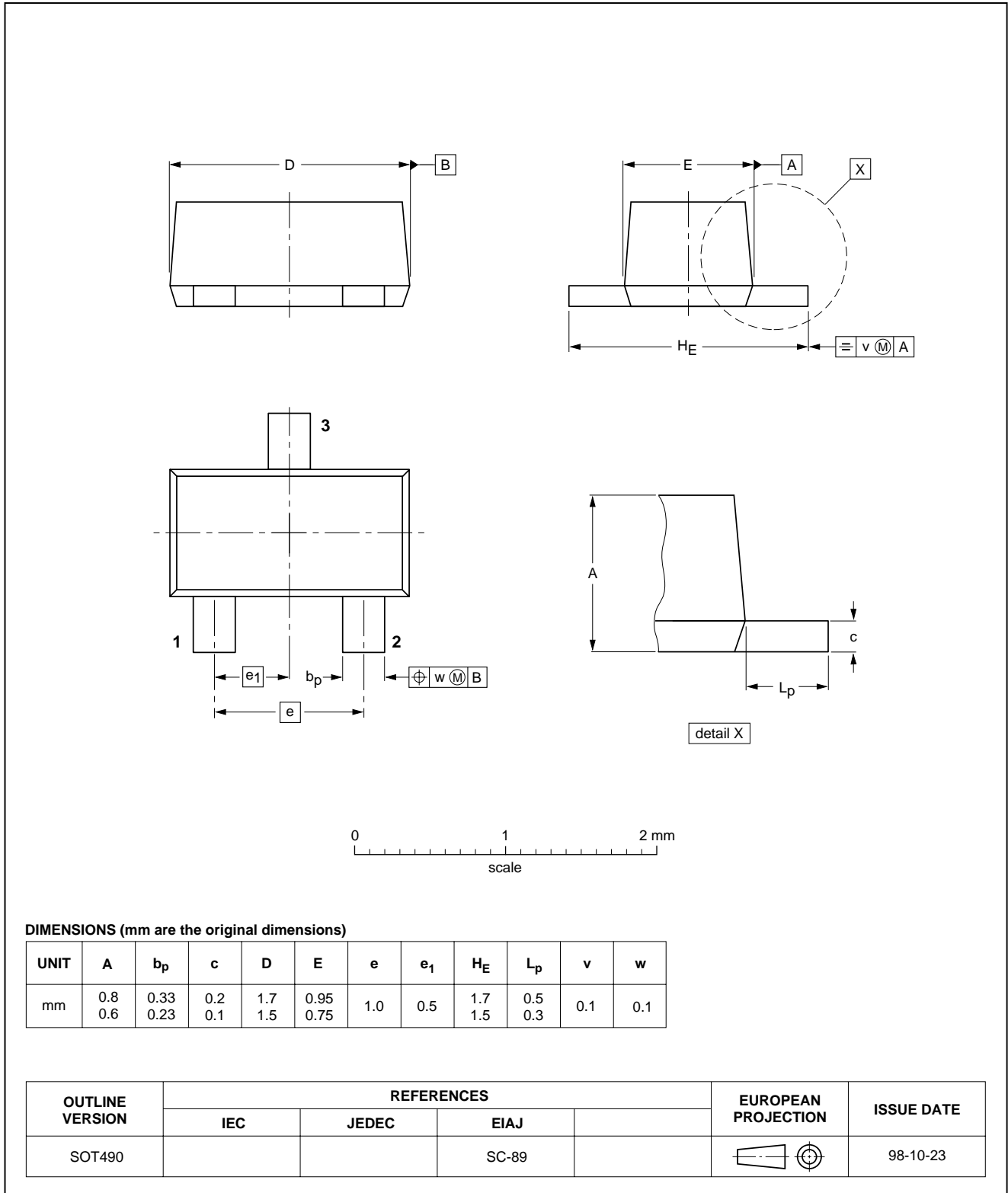
40 V low V_{CEsat} PNP transistor

PBSS3540F

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT490



40 V low V_{CEsat} PNP transistor

PBSS3540F

DATA SHEET STATUS

DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITIONS
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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40 V low V_{CEsat} PNP transistor

PBSS3540F

NOTES

40 V low V_{CEsat} PNP transistor

PBSS3540F

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