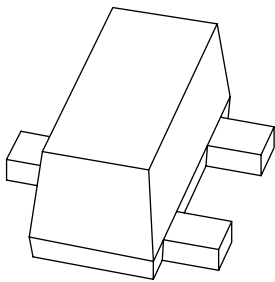


# DATA SHEET



**PBSS3540F**

40 V low  $V_{CEsat}$  PNP transistor

Product specification  
Supersedes data of 2004 May 04

2004 Jun 11

# 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

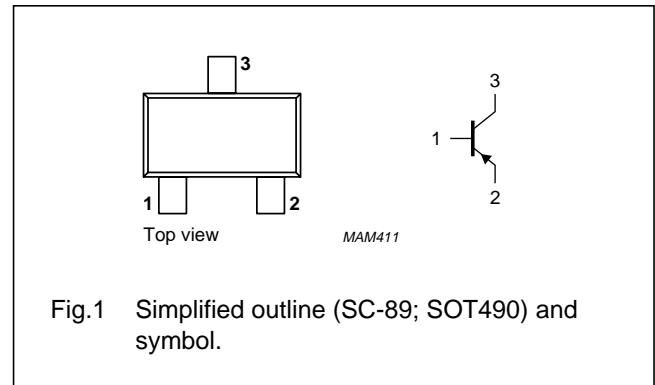
TYPE NUMBER	MARKING CODE
PBSS3540F	2D

### 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 $\Omega$

### PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	collector



### ORDERING INFORMATION

TYPE NUMBER	PACKAGE		
	NAME	DESCRIPTION	VERSION
PBSS3540F	-	plastic surface mounted package; 3 leads	SOT490

40 V low  $V_{CEsat}$  PNP transistor

## PBSS3540F

**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	$T_{amb} \leq 25\text{ °C}$	–	250	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
$R_{th(j-a)}$	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	$V_{CB} = -40\text{ V}; I_E = 0\text{ A}$	–	–	–100	nA
		$V_{CB} = -40\text{ V}; I_E = 0\text{ A}; T_j = 150\text{ °C}$	–	–	–50	$\mu\text{A}$
$I_{BEO}$	emitter-base cut-off current	$V_{EB} = -5\text{ V}; I_C = 0\text{ A}$	–	–	–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	$V_{CB} = -10\text{ V}; I_E = I_e = 0\text{ A};$ $f = 1\text{ MHz}$	–	–	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:  $t_p \leq 300\text{ }\mu\text{s}$ ;  $\delta \leq 0.02$ .

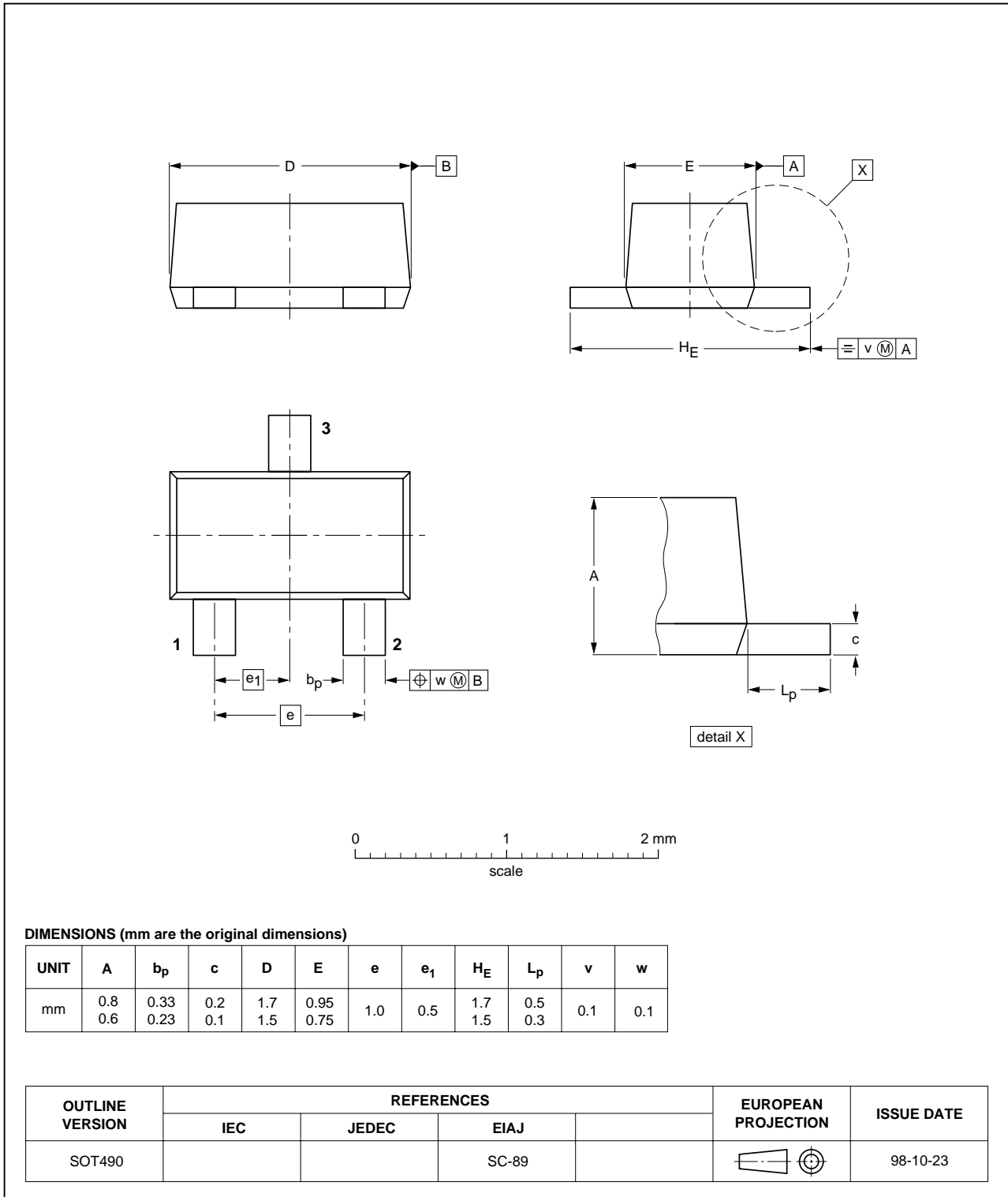
40 V low  $V_{CEsat}$  PNP transistor

PBSS3540F

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT490



40 V low  $V_{CEsat}$  PNP transistor

PBSS3540F

## DATA SHEET STATUS

LEVEL	DATA SHEET STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)(3)</sup>	DEFINITION
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