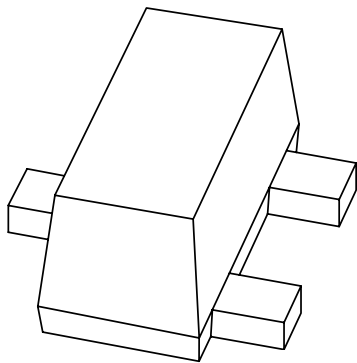


# DATA SHEET



**2PA1774J**

**PNP general purpose transistor**

Product specification  
Supersedes data of 2000 Dec 12

2001 Aug 03

# PNP general purpose transistor

2PA1774J

## FEATURES

- Power dissipation comparable to SOT23
- Low output capacitance
- Low saturation voltage  $V_{CEsat}$
- Low current (max. 100 mA)
- Low voltage (max. 50 V).

## APPLICATIONS

- General purpose switching and amplification in miniaturized application areas such as telecom and multimedia.

## DESCRIPTION

PNP transistor encapsulated in an ultra small plastic SMD SC-89 (SOT490) package.  
NPN complement: 2PC4617J.

## MARKING

TYPE NUMBER	MARKING CODE
2PA1774QJ	YQ
2PA1774RJ	YR
2PA1774SJ	YS

## PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	collector

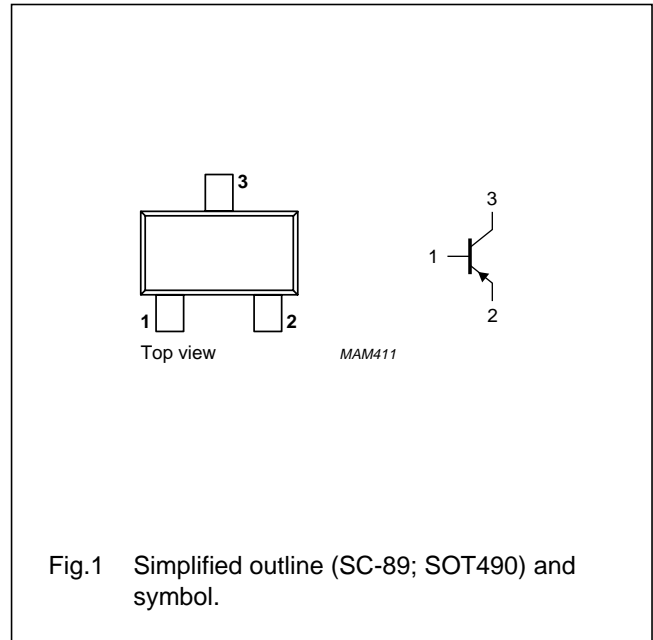


Fig.1 Simplified outline (SC-89; SOT490) and symbol.

## 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	-	-50	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		-	-100	mA
$P_{tot}$	total power dissipation	$T_{amb} \leq 25\text{ }^\circ\text{C}$ ; note 1	-	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	$^\circ\text{C}$

## Note

1. Refer to SC-89 (SOT490) standard mounting conditions.

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## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	in free air; note 1	500	K/W

## Note

1. Refer to SC-89 (SOT490) standard mounting conditions.

## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$I_{CBO}$	collector cut-off current	$I_E = 0; V_{CB} = -30\text{ V}$	–	–100	nA
		$I_E = 0; V_{CB} = -30\text{ V}; T_j = 150\text{ °C}$	–	–5	$\mu\text{A}$
$I_{EBO}$	emitter cut-off current	$I_C = 0; V_{EB} = -4\text{ V}$	–	–100	nA
$h_{FE}$	DC current gain 2PA1774QJ 2PA1774RJ 2PA1774SJ	$I_C = -1\text{ mA}; V_{CE} = -6\text{ V};$ note 1	120	270	
			180	390	
			270	560	
$V_{CEsat}$	collector-emitter saturation voltage	$I_C = -50\text{ mA}; I_B = -5\text{ mA};$ note 1	–	–200	mV
$C_c$	collector capacitance	$I_E = i_e = 0; V_{CB} = -12\text{ V}; f = 1\text{ MHz}$	–	2.2	pF
$f_T$	transition frequency	$I_C = -2\text{ mA}; V_{CE} = -12\text{ V};$ $f = 100\text{ MHz};$ note 1	100	–	MHz

## Note

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

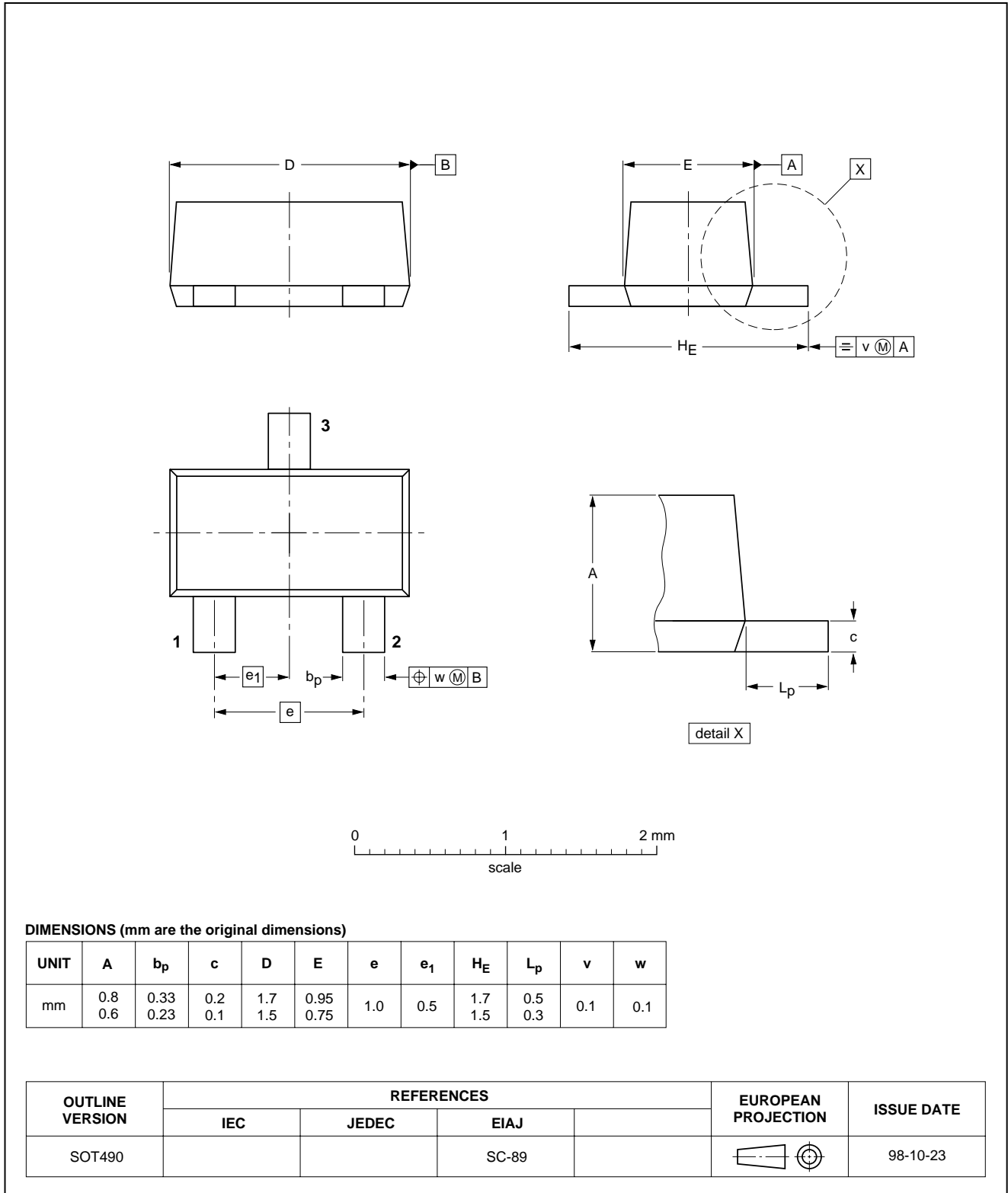
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PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT490



## PNP general purpose transistor

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## DATA SHEET STATUS

DATA SHEET STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)</sup>	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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**NOTES**

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**NOTES**

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