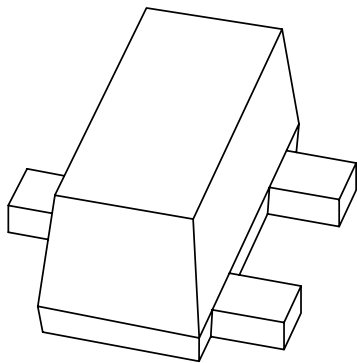


DATA SHEET



2PC4617J

NPN general purpose transistor

Product specification
Supersedes data of 1999 May 04

2001 Aug 03

NPN general purpose transistor

2PC4617J

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

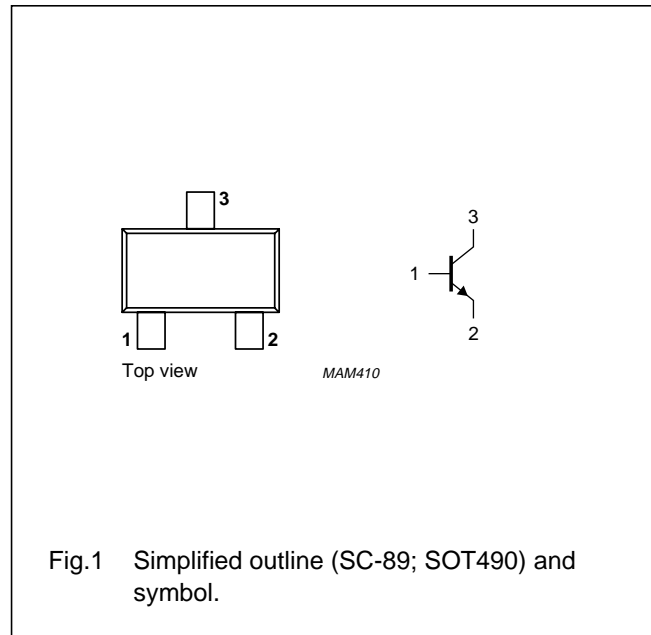
NPN transistor encapsulated in an ultra small plastic SMD SC-89 (SOT490) package.
PNP complement: 2PA1774J.

MARKING

TYPE NUMBER	MARKING CODE
2PC4617QJ	ZQ
2PC4617RJ	ZR
2PC4617SJ	ZS

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	–	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		–	200	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.

NPN general purpose transistor

2PC4617J

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	μA
I_{EBO}	emitter cut-off current	$I_C = 0; V_{EB} = 4\text{ V}$	–	100	nA
h_{FE}	DC current gain 2PC4617QJ 2PC4617RJ 2PC4617SJ	$I_C = 1\text{ mA}; V_{CE} = 6\text{ V};$ 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	$I_E = i_e = 0; V_{CB} = 12\text{ V}; f = 1\text{ MHz}$	–	1.5	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: $t_p \leq 300\text{ }\mu\text{s}; \delta \leq 0.02$.

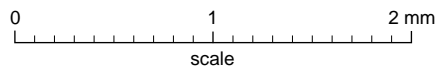
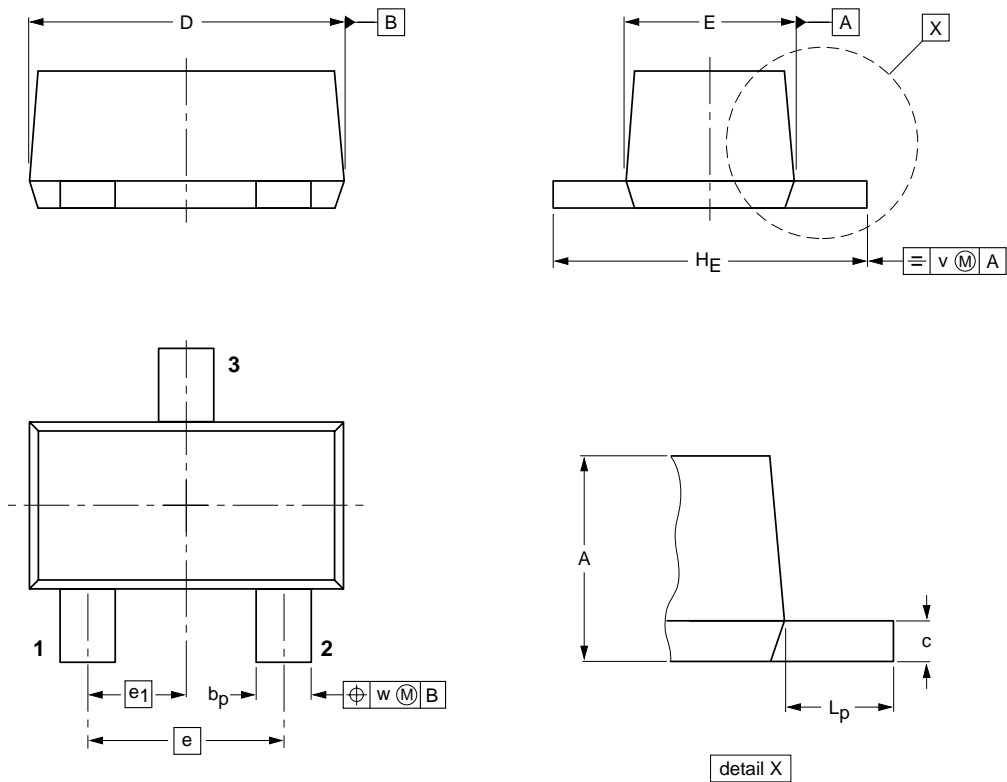
NPN general purpose transistor

2PC4617J

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT490



DIMENSIONS (mm are the original dimensions)

UNIT	A	b_p	c	D	E	e	e_1	H_E	L_p	v	w
mm	0.8 0.6	0.33 0.23	0.2 0.1	1.7 1.5	0.95 0.75	1.0	0.5	1.7 1.5	0.5 0.3	0.1	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT490			SC-89			98-10-23

NPN general purpose transistor

2PC4617J

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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NPN general purpose transistor

2PC4617J

NOTES

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2PC4617J

NOTES

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