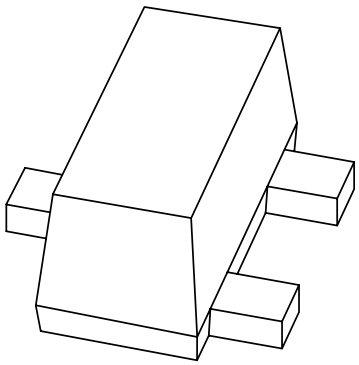
DATA SHEET



2PC4617J
NPN general purpose transistor

Product specification
Supersedes data of 1999 May 04

2001 Aug 03

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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

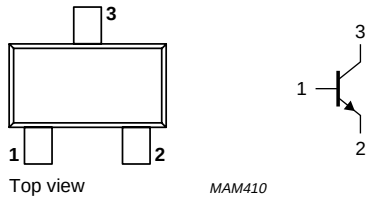


Fig.1 Simplified outline (SC-89; SOT490) and symbol.

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		–	200	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25$ °C; note 1	–	250	mW
T_{stg}	storage temperature		–65	+150	°C
T_j	junction temperature		–	150	°C
T_{amb}	operating ambient temperature		–65	+150	°C

Note

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

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
$R_{th\ j\text{-}a}$	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 °C unless otherwise specified.

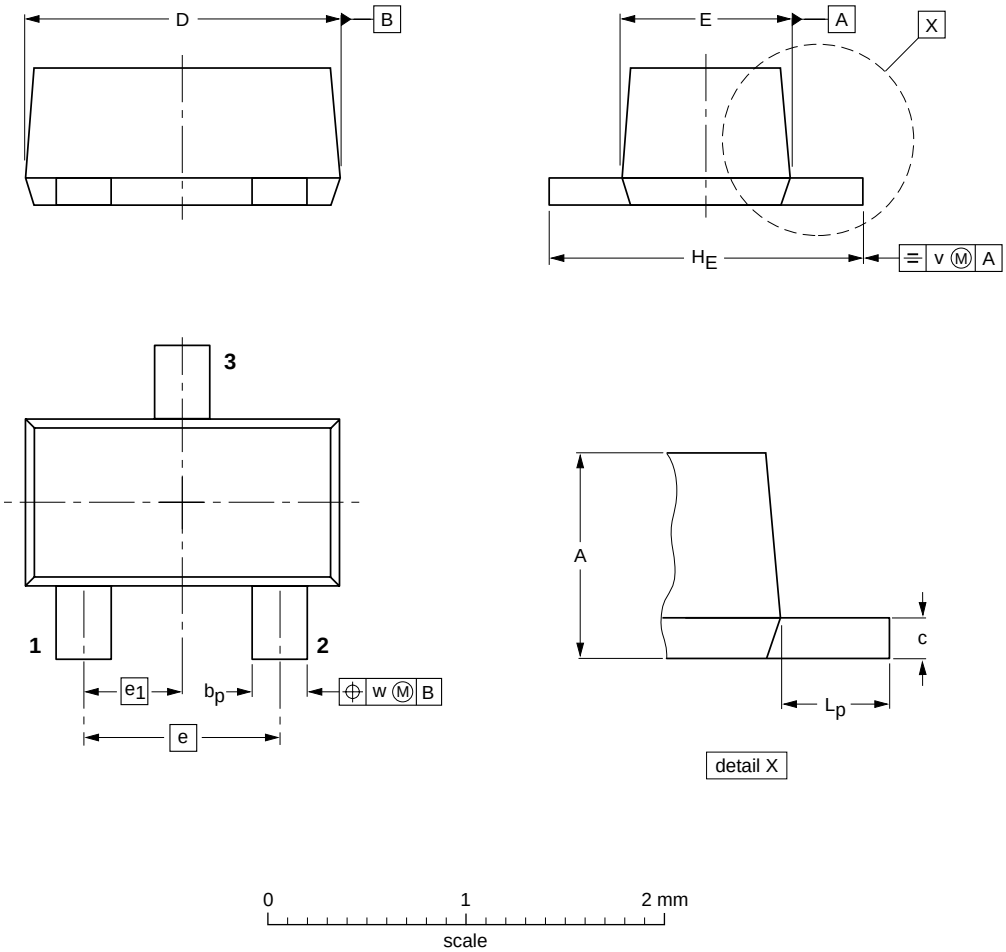
SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I_{CBO}	collector cut-off current	I_E = 0; V_{CB} = 30 V	–	100	nA
		I_E = 0; V_{CB} = 30 V; T_j = 150 °C	–	5	μA
I_{EBO}	emitter cut-off current	I_C = 0; V_{EB} = 4 V	–	100	nA
h_{FE}	DC current gain	I_C = 1 mA; V_{CE} = 6 V; note 1			
	2PC4617QJ		120	270	
	2PC4617RJ		180	390	
	2PC4617SJ		270	560	
V_{CEsat}	collector-emitter saturation voltage	I_C = 50 mA; I_B = 5 mA; note 1	–	200	mV
C_c	collector capacitance	$I_E = i_e$ = 0; V_{CB} = 12 V; f = 1 MHz	–	1.5	pF
f_T	transition frequency	I_C = 2 mA; V_{CE} = 12 V; f = 100 MHz; note 1	100	–	MHz

Note

1. Pulse test: $t_p \leq 300$ μs; $\delta \leq 0.02$.

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

DATA SHEET STATUS

DATA SHEET STATUS[1]	PRODUCT STATUS[2]	DEFINITIONS
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