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Kind regards,

Team Nexperia





Product data sheet

Product profile 1.

1.1 General description

NPN transistor in a SOT416 (SC-75) plastic package. The PNP complement is 2PA1774.

1.2 Features

- Low current (max. 150 mA)
- Low voltage (max. 50 V)

1.3 Applications

General-purpose switching and amplification in communication, Electronic Data Processing (EDP) and consumer applications.

2. **Pinning information**

Table 1.	Pinning		
Pin	Description	Simplified outline	Symbol
1	base		
2	emitter		3
3	collector	1 2	
			sym021

Ordering information 3.

Table 2. **Ordering information**

Type number	Package				
	Name	Description	Version		
2PC4617Q	SC-75	plastic surface mounted package; 3 leads	SOT416		
2PC4617R					
2PC4617S					



4. Marking

Table 3. Marking codes	
Type number	Marking code
2PC4617Q	ZQ
2PC4617R	ZR
2PC4617S	ZS

5. Limiting values

Table 4. 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	-	60	V
V _{CEO}	collector-emitter voltage	open base	-	50	V
V _{EBO}	emitter-base voltage	open collector	-	7	V
I _C	collector current (DC)		-	150	mA
I _{CM}	peak collector current		-	200	mA
I _{BM}	peak base current		-	200	mA
P _{tot}	total power dissipation	$T_{amb} \le 25 \ ^{\circ}C$	<u>[1]</u> -	150	mW
T _{stg}	storage temperature		-65	+150	°C
Tj	junction temperature		-	150	°C
T _{amb}	ambient temperature		-65	+150	°C

[1] Transistor mounted on an FR4 printed-circuit board, single-sided copper, tin-plated and standard footprint.

6. Thermal characteristics

Table 5.	Thermal characteristics					
Symbol	Parameter	Conditions	Min	Тур	Max	Unit
R _{th(j-a)}	thermal resistance from junction to ambient		<u>[1]</u> _	-	833	K/W

[1] Transistor mounted on an FR4 printed-circuit board, single-sided copper, tin-plated and standard footprint.

7. Characteristics

Symbol	Parameter	Conditions	Min	Тур	Max	Unit
I _{CBO}	collector-base cut-off current	$I_E = 0 \text{ A}; V_{CB} = 30 \text{ V}$	-	-	100	nA
		$I_E = 0 \text{ A}; V_{CB} = 30 \text{ V};$ $T_j = 150 \text{ °C}$	-	-	5	μA
I _{EBO}	emitter-base cut-off current	$I_{C} = 0 \text{ A}; V_{EB} = 4 \text{ V}$	-	-	100	nA
h _{FE}	DC current gain	$I_{C} = 1 \text{ mA}; V_{CE} = 6 \text{ V}$	<u>[1]</u>			
	2PC4617Q		120	-	270	
	2PC4617R		180	-	390	
	2PC4617S		270	-	560	
V _{CEsat}	collector-emitter saturation voltage	I _C = 50 mA; I _B = 5 mA	<u>[1]</u> -	-	200	mV
C _c	collector capacitance	I _E = i _e = 0 A; 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	[<u>1]</u> 100	-	-	MHz

[1] Pulse test: $t_p \le 300 \ \mu s$; $\delta \le 0.02$.

2PC4617_5

NPN general-purpose transistor

8. Package outline

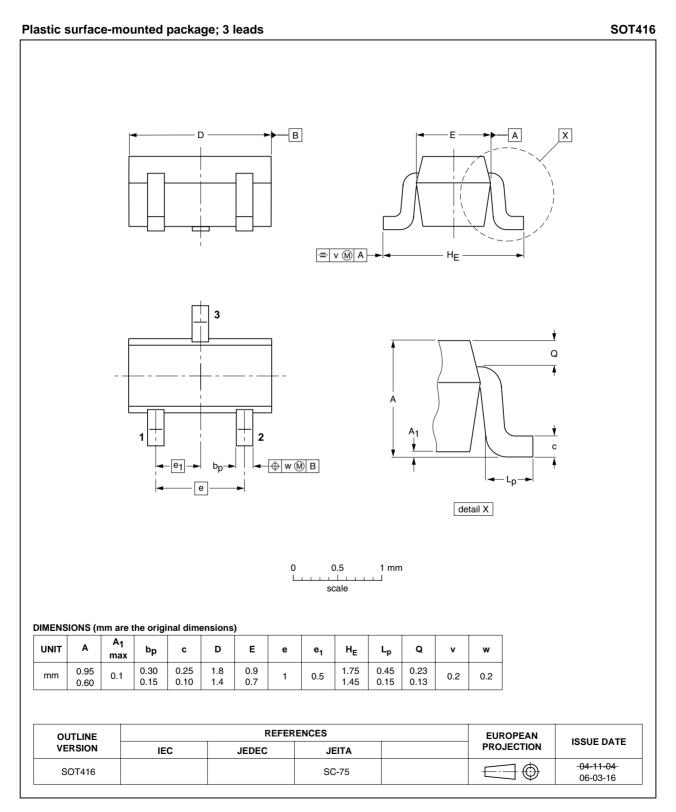


Fig 1. Package outline SOT416 (SC-75)

9. Revision history

Table 7. Revision hist	ory			
Document ID	Release date	Data sheet status	Change notice	Supersedes
2PC4617_5	20091117	Product data sheet	-	2PC4617_4
Modifications:	including new l content.	t was changed to reflect the egal definitions and disclair age outline SOT416 (SC-75	ners. No changes we	
2PC4617_4	20041125	Product data sheet	-	2PC4617_3
2PC4617_3	19990521	Product specification	-	2PC4617_2
2PC4617_2	19980721	Product specification	-	2PC4617_1
2PC4617_1	19970709	Product specification	-	-

10. Legal information

10.1 Data sheet status

Document status[1][2]	Product status ^[3]	Definition
Objective [short] data sheet	Development	This document contains data from the objective specification for product development.
Preliminary [short] data sheet	Qualification	This document contains data from the preliminary specification.
Product [short] data sheet	Production	This document contains the product specification.

[1] Please consult the most recently issued document before initiating or completing a design.

[2] The term 'short data sheet' is explained in section "Definitions".

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NPN general-purpose transistor

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