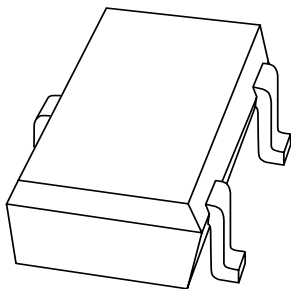


# DATA SHEET



**2PA1576**

**PNP general purpose transistor**

Product specification  
Supersedes data of 1997 Mar 28

1999 May 31

# PNP general purpose transistor

# 2PA1576

### FEATURES

- Low current (max. 100 mA)
- Low voltage (max. 40 V)
- Low collector capacitance (typ. 2.5 pF).

### APPLICATIONS

- General purpose switching and amplification.

### DESCRIPTION

PNP transistor in a SC-70 (SOT323) plastic package.  
NPN complement: 2PC4081.

### MARKING

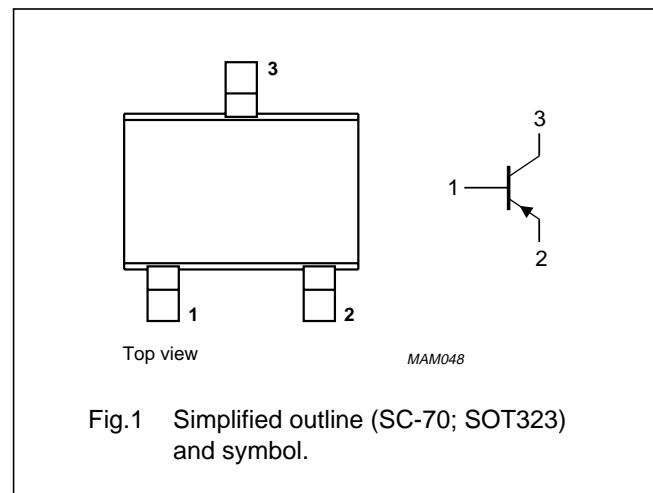
TYPE NUMBER	MARKING CODE <sup>(1)</sup>
2PA1576Q	F*Q
2PA1576R	F*R
2PA1576S	F*S

### Note

1. \* = -: Made in Hong Kong.  
\* = t: Made in Malaysia.

### PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	collector



### LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V <sub>CBO</sub>	collector-base voltage	open emitter	-	-50	V
V <sub>CEO</sub>	collector-emitter voltage	open base	-	-40	V
V <sub>EBO</sub>	emitter-base voltage	open collector	-	-5	V
I <sub>C</sub>	collector current (DC)		-	-100	mA
I <sub>CM</sub>	peak collector current		-	-200	mA
I <sub>BM</sub>	peak base current		-	-200	mA
P <sub>tot</sub>	total power dissipation	T <sub>amb</sub> ≤ 25 °C; note 1	-	200	mW
T <sub>stg</sub>	storage temperature		-65	+150	°C
T <sub>j</sub>	junction temperature		-	150	°C
T <sub>amb</sub>	operating ambient temperature		-65	+150	°C

### Note

1. Refer to SC-70 (SOT323) standard mounting conditions.

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## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	625	K/W

## Note

1. Refer to SC-70 (SOT323) standard mounting conditions.

## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT				
$I_{CBO}$	collector cut-off current	$I_E = 0; V_{CB} = -30\text{ V}$	–	–	–100	nA				
		$I_E = 0; V_{CB} = -30\text{ V}; T_j = 150\text{ }^{\circ}\text{C}$	–	–	–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	$I_C = -1\text{ mA}; V_{CE} = -6\text{ V}$								
							2PA1576Q	120	–	270
							2PA1576R	180	–	390
	2PA1576S	270	–	560						
$V_{CEsat}$	saturation voltage	$I_C = -50\text{ mA}; I_B = -5\text{ mA}; \text{note 1}$	–	–	–500	mV				
$C_c$	collector capacitance	$I_E = I_e = 0; V_{CB} = -12\text{ V}; f = 1\text{ MHz}$	–	2.5	3.5	pF				
$f_T$	transition frequency	$I_C = -2\text{ mA}; V_{CE} = -12\text{ V}; f = 100\text{ MHz}$	100	–	–	MHz				

## Note

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

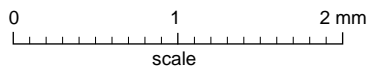
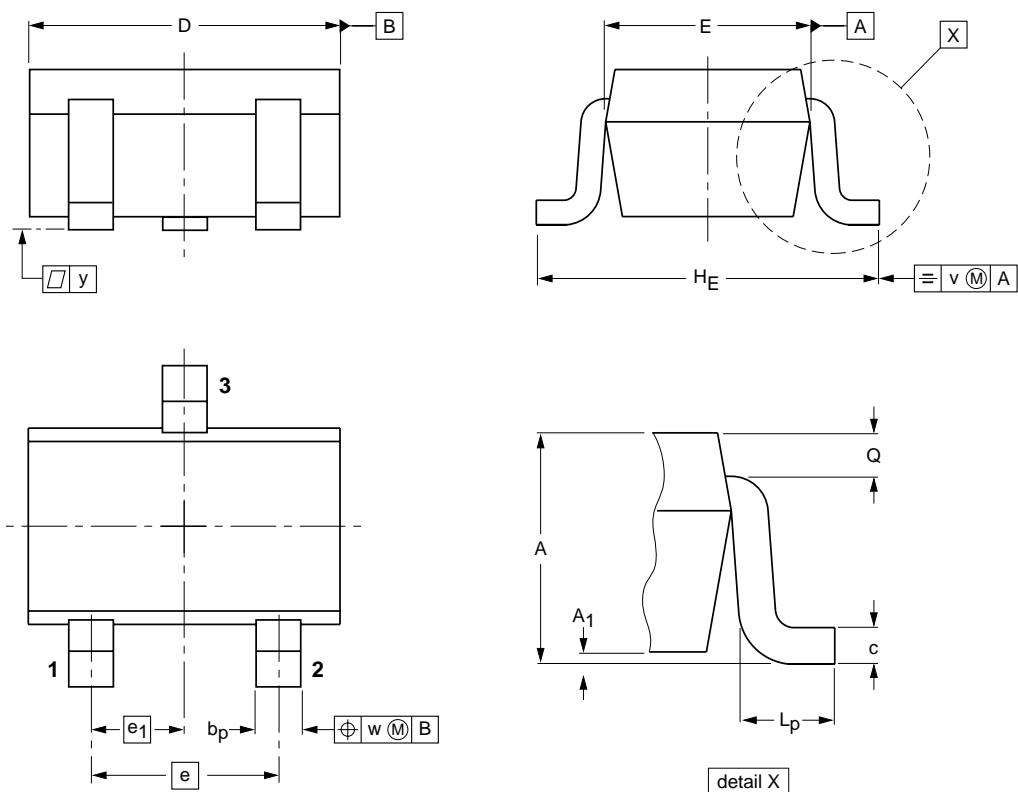
PNP general purpose transistor

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PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A <sub>1</sub> max	b <sub>p</sub>	c	D	E	e	e <sub>1</sub>	H <sub>E</sub>	L <sub>p</sub>	Q	v	w
mm	1.1 0.8	0.1	0.4 0.3	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.23 0.13	0.2	0.2

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT323			SC-70			97-02-28

## PNP general purpose transistor

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**DEFINITIONS**

<b>Data sheet status</b>	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
<b>Limiting values</b>	
Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.	
<b>Application information</b>	
Where application information is given, it is advisory and does not form part of the specification.	

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PNP general purpose transistor

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**NOTES**

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**NOTES**

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