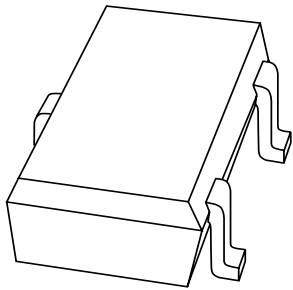


DATA SHEET



2PA1576

PNP general purpose transistor

Objective specification
Supersedes data of September 1994
File under Discrete Semiconductors, SC04

1997 Mar 28

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

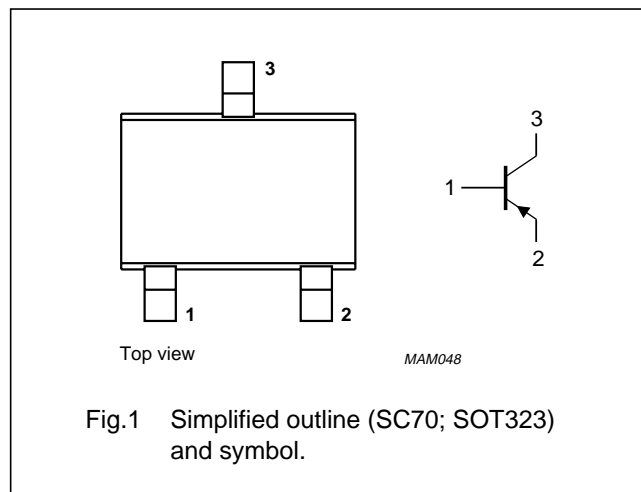
PNP transistor in a SC70; SOT323 plastic package.
NPN complement: 2PC4081.

MARKING

TYPE NUMBER	MARKING CODE
2PA1576Q	FtQ
2PA1576R	FtR
2PA1576S	FtS

PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	collector



QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CBO}	collector-base voltage	open emitter	–	–50	V
V_{CEO}	collector-emitter voltage	open base	–	–40	V
I_C	collector current (DC)		–	–100	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25\text{ }^\circ\text{C}$	–	200	mW
h_{FE}	DC current gain	$I_C = -1\text{ mA}$; $V_{CE} = -6\text{ V}$	120	560	
f_T	transition frequency	$I_C = -2\text{ mA}$; $V_{CE} = -12\text{ V}$; $f = 100\text{ MHz}$	100	–	MHz

PNP general purpose transistor

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LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CBO}	collector-base voltage	open emitter	–	–50	V
V_{CEO}	collector-emitter voltage	open base	–	–40	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	$T_{amb} \leq 25\text{ °C}$; note 1	–	200	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 SC70; SOT323 standard mounting conditions.

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 SC70; SOT323 standard mounting conditions.

CHARACTERISTICS $T_{amb} = 25\text{ °C}$ 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
		$I_E = 0$; $V_{CB} = -30\text{ V}$; $T_j = 150\text{ °C}$	–	–	–5	μA
I_{EBO}	emitter cut-off current	$I_C = 0$; $V_{EB} = -4\text{ V}$	–	–	–100	nA
h_{FE}	DC current gain 2PA1576Q 2PA1576R 2PA1576S	$I_C = -1\text{ mA}$; $V_{CE} = -6\text{ V}$	120	–	270	
			180	–	390	
			270	–	560	
V_{CEsat}	saturation voltage	$I_C = -50\text{ mA}$; $I_B = -5\text{ mA}$; 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: $t_p \leq 300\text{ }\mu\text{s}$; $\delta \leq 0.02$.

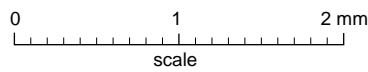
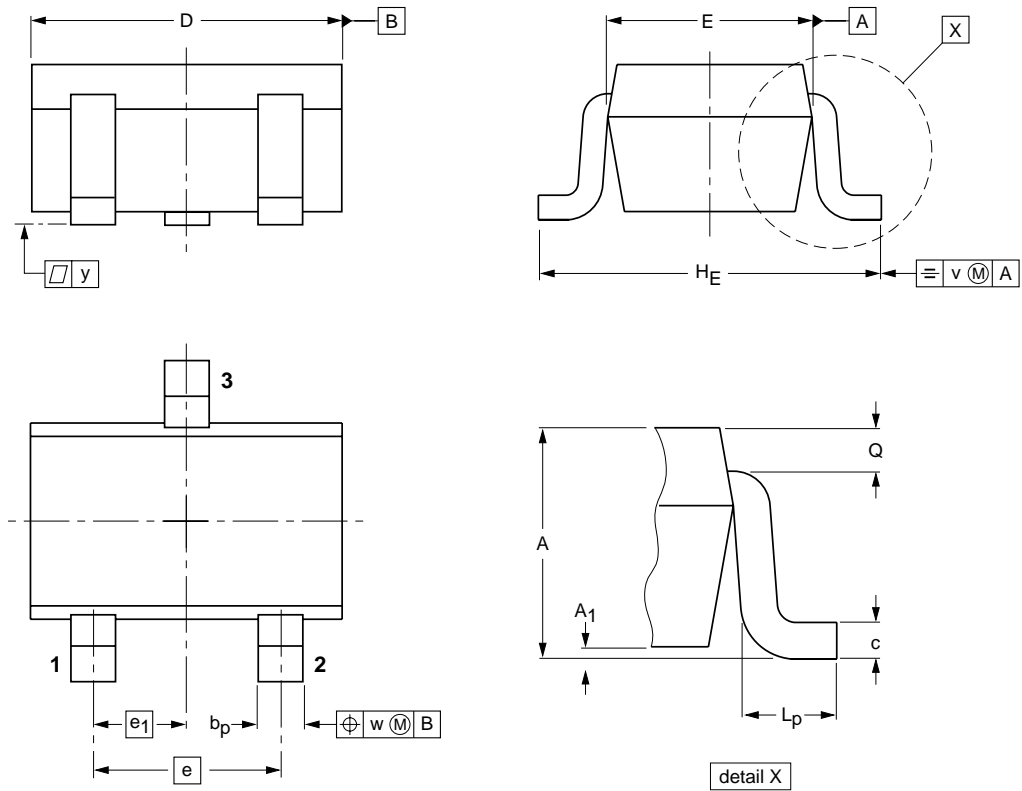
PNP general purpose transistor

2PA1576

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max	b _p	c	D	E	e	e ₁	H _E	L _p	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

Data sheet status	
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.
Limiting values	
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.	
Application information	
Where application information is given, it is advisory and does not form part of the specification.	

LIFE SUPPORT APPLICATIONS

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PNP general purpose transistor

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NOTES

PNP general purpose transistor

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NOTES

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