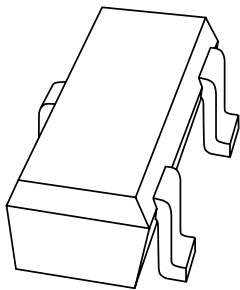


DATA SHEET



2PD602A

NPN general purpose transistor

Product data sheet
Supersedes data of 1997 Jun 20

1999 Apr 23

NPN general purpose transistor

2PD602A

FEATURES

- High current (max. 500 mA)
- Low voltage (max. 50 V).

APPLICATIONS

- General purpose switching and amplification.

DESCRIPTION

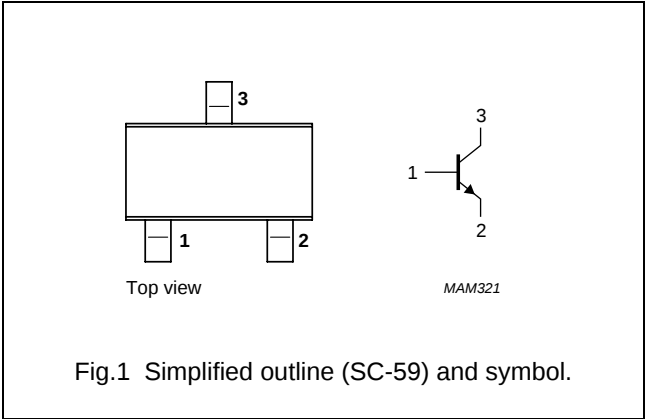
NPN transistor in an SC-59 plastic package.
PNP complement: 2PB710A.

MARKING

TYPE NUMBER	MARKING CODE
2PD602AQ	XQ
2PD602AR	XR
2PD602AS	XS

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 _{CBO}	collector-base voltage	open emitter	–	60	V
V _{CEO}	collector-emitter voltage	open base	–	50	V
V _{EBO}	emitter-base voltage	open collector	–	5	V
I _C	collector current (DC)		–	500	mA
I _{CM}	peak collector current		–	1	A
I _{BM}	peak base current		–	200	mA
P _{tot}	total power dissipation	T _{amb} ≤ 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. Transistor mounted on an FR4 printed-circuit board.

NPN general purpose transistor

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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	500	K/W

Note

1. Transistor mounted on an FR4 printed-circuit board.

CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I_{CBO}	collector cut-off current	$I_E = 0; V_{CB} = 60\text{ V}$	–	10	nA
		$I_E = 0; V_{CB} = 60\text{ V}; T_j = 150\text{ °C}$	–	5	μA
I_{EBO}	emitter cut-off current	$I_C = 0; V_{EB} = 4\text{ V}$	–	10	nA
h_{FE}	DC current gain	$I_C = 150\text{ mA}; V_{CE} = 10\text{ V}; \text{note 1}$			
	2PD602AQ		85	170	
	2PD602AR		120	240	
	2PD602AS		170	340	
	DC current gain	$I_C = 500\text{ mA}; V_{CE} = 10\text{ V}; \text{note 1}$	40	–	
V_{CEsat}	collector-emitter saturation voltage	$I_C = 300\text{ mA}; I_B = 30\text{ mA}; \text{note 1}$	–	600	mV
C_c	collector capacitance	$I_E = i_e = 0; V_{CB} = 10\text{ V}; f = 1\text{ MHz}$	–	15	pF
f_T	transition frequency	$I_C = 50\text{ mA}; V_{CE} = 10\text{ V}; f = 100\text{ MHz}; \text{note 1}$			
	2PD602AQ		140	–	MHz
	2PD602AR		160	–	MHz
	2PD602AS		180	–	MHz

Note

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

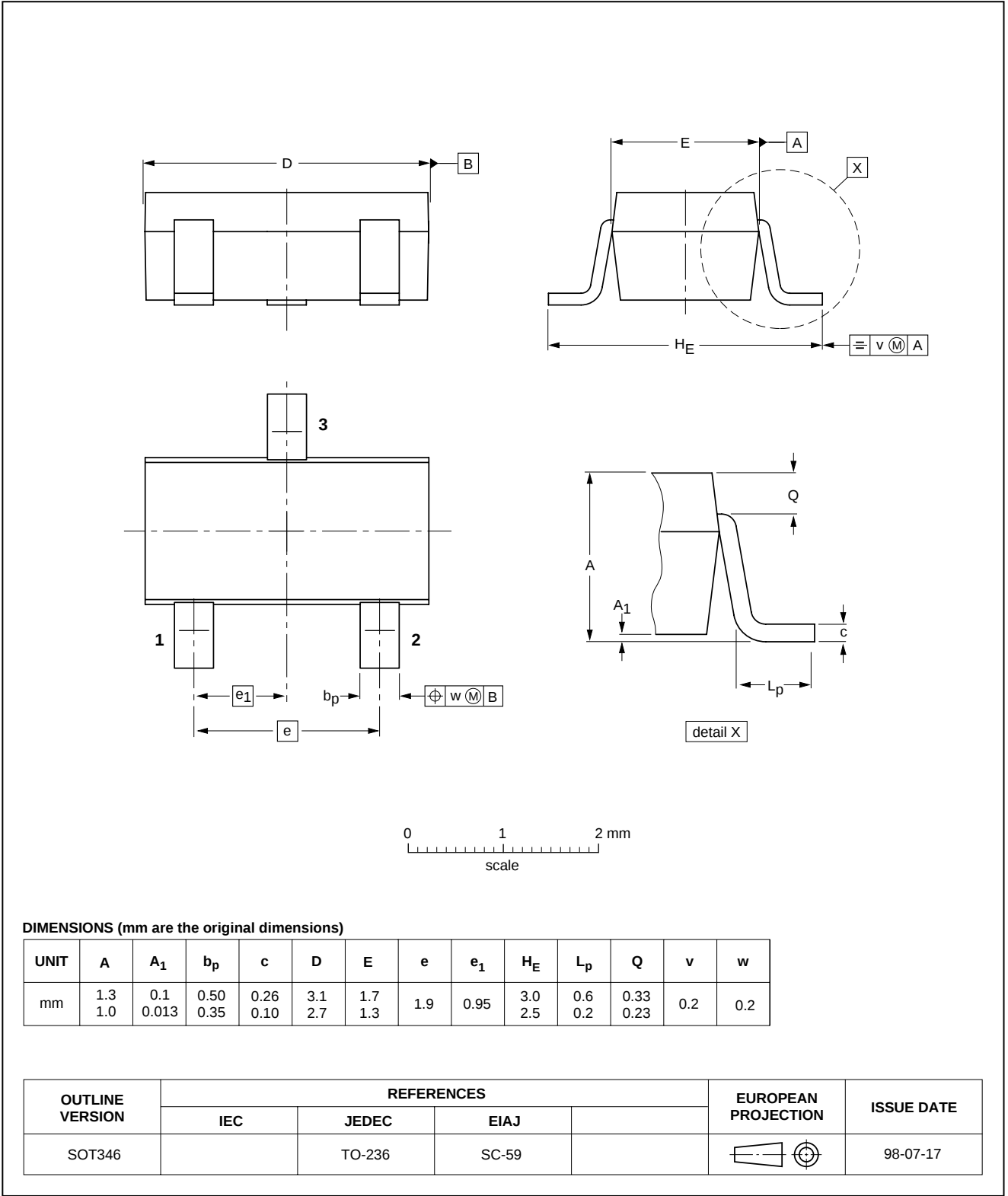
NPN general purpose transistor

2PD602A

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT346



NPN general purpose transistor**2PD602A****DATA SHEET STATUS**

DOCUMENT STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITION
Objective data sheet	Development	This document contains data from the objective specification for product development.
Preliminary data sheet	Qualification	This document contains data from the preliminary specification.
Product data sheet	Production	This document contains the product specification.

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Printed in The Netherlands

115002/00/04/pp6

Date of release: 1999 Apr 23

Document order number: 9397 750 05396

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