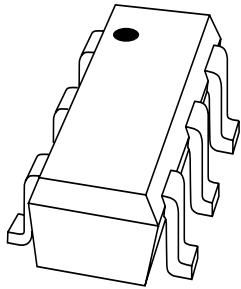


# DATA SHEET



## **PUMT1** PNP general purpose double transistor

Product data sheet  
Supersedes data of 1999 Apr 14

2001 Dec 19

# PNP general purpose double transistor

# PUMT1

### FEATURES

- Low current (max. 100 mA)
- Low voltage (max. 40 V)
- Reduces number of components and boardspace.

### APPLICATIONS

- General purpose switching and amplification.

### DESCRIPTION

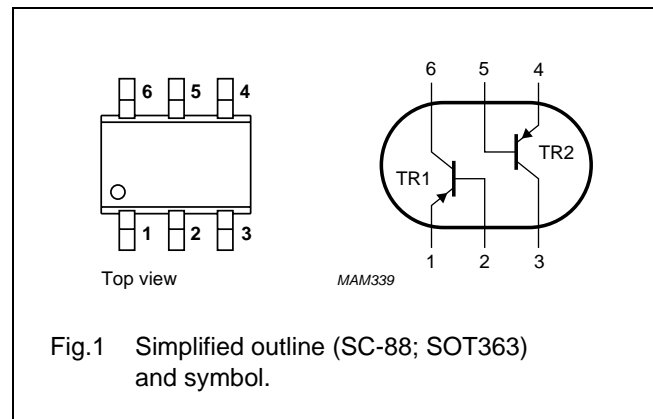
Two independently operating PNP transistors in an SC-88; SOT363 plastic package. NPN complement: PUMX1.

### MARKING

TYPE NUMBER	MARKING CODE
PUMT1	FtF

### PINNING

PIN	DESCRIPTION
1, 4	emitter TR1; TR2
2, 5	base TR1; TR2
3, 6	collector TR2; TR1



### LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
<b>Per transistor</b>					
$V_{CBO}$	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	$T_{amb} \leq 25\text{ °C}$	–	200	mW
$T_{stg}$	storage temperature		–65	+150	°C
$T_j$	junction temperature		–	150	°C
$T_{amb}$	operating ambient temperature		–65	+150	°C
<b>Per device</b>					
$P_{tot}$	total power dissipation	$T_{amb} \leq 25\text{ °C}$ ; note 1	–	300	mW

### Note

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

## PNP general purpose double transistor

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## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
<b>Per device</b>				
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	416	K/W

**Note**

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

## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
<b>Per transistor</b>					
$I_{CBO}$	collector cut-off current	$I_E = 0; V_{CB} = -30\text{ V}$	–	–100	nA
		$I_E = 0; V_{CB} = -30\text{ V}; T_j = 150\text{ °C}$	–	–10	$\mu\text{A}$
$I_{EBO}$	emitter cut-off current	$I_C = 0; V_{EB} = -4\text{ V}$	–	–100	nA
$h_{FE}$	DC current gain	$I_C = -1\text{ mA}; V_{CE} = -6\text{ V}$	120	–	
$V_{CEsat}$	collector-emitter saturation voltage	$I_C = 50\text{ mA}; I_B = -5\text{ mA}; \text{note 1}$	–	–200	mV
$C_c$	collector capacitance	$I_E = i_e = 0; V_{CB} = -12\text{ V}; f = 1\text{ MHz}$	–	2.2	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:  $t_p \leq 300\ \mu\text{s}$ ;  $\delta \leq 0.02$ .

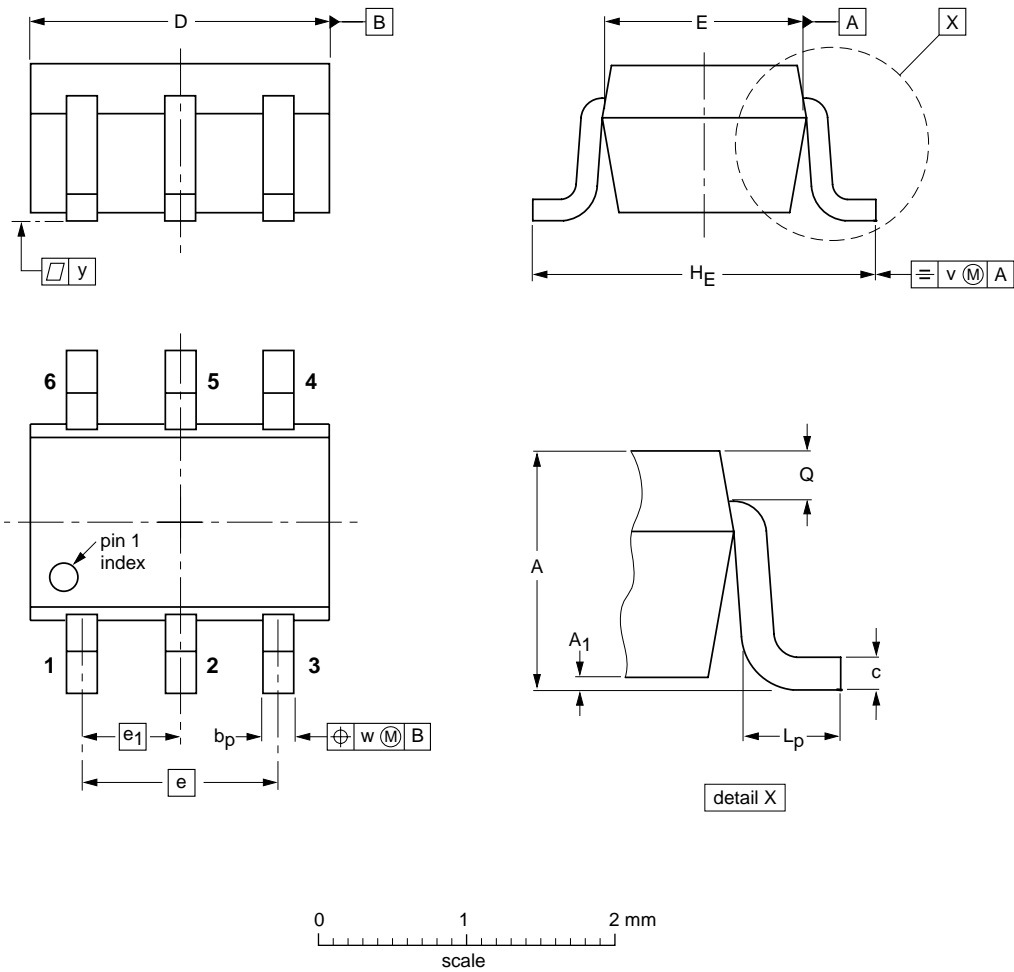
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PACKAGE OUTLINE

Plastic surface mounted package; 6 leads

SOT363



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	y
mm	1.1 0.8	0.1	0.30 0.20	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.25 0.15	0.2	0.2	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT363			SC-88			97-02-28

PNP general purpose double transistor

PUMT1

DATA SHEET STATUS

DOCUMENT STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)</sup>	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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For additional information please visit: **<http://www.nxp.com>**

For sales offices addresses send e-mail to: **[salesaddresses@nxp.com](mailto:salesaddresses@nxp.com)**

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