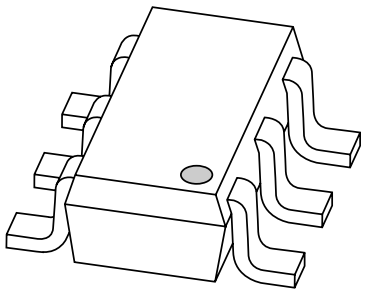
DATA SHEET



PIMT1
PNP general purpose double transistor

Product data sheet

2001 Oct 22

PNP general purpose double transistor PIMT1

FEATURES

- 600 mW total power dissipation
- Low current (max. 100 mA)
- Low voltage (max. 40 V)
- Reduces number of components and required PCB area
- Reduced pick and place costs.

APPLICATIONS

- General purpose switching and amplification.

DESCRIPTION

PNP transistor pair in an SC-74 (SOT457) plastic package.

MARKING

TYPE NUMBER	MARKING CODE
PIMT1	M1

PINNING

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

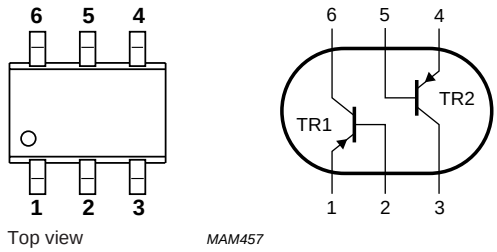


Fig.1 Simplified outline (SC74; SOT457) and symbol.

LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
Per transistor					
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	$T_{amb} \leq 25$ °C; note 1	–	300	mW
T_{stg}	storage temperature		−65	+150	°C
T_j	junction temperature		–	150	°C
T_{amb}	operating ambient temperature		−65	+150	°C
Per device					
P_{tot}	total power dissipation	$T_{amb} \leq 25$ °C; note 1	–	600	mW

Note

1. Device mounted on a printed-circuit board, single sided copper, tinplated and mounting pad for collector 1 cm^2.

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j\text{-}a}$	thermal resistance from junction to ambient	note 1	208	K/W

Note

1. Device mounted on a printed-circuit board, single sided copper, tinplated and mounting pad for collector 1 cm^2.

CHARACTERISTICS

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

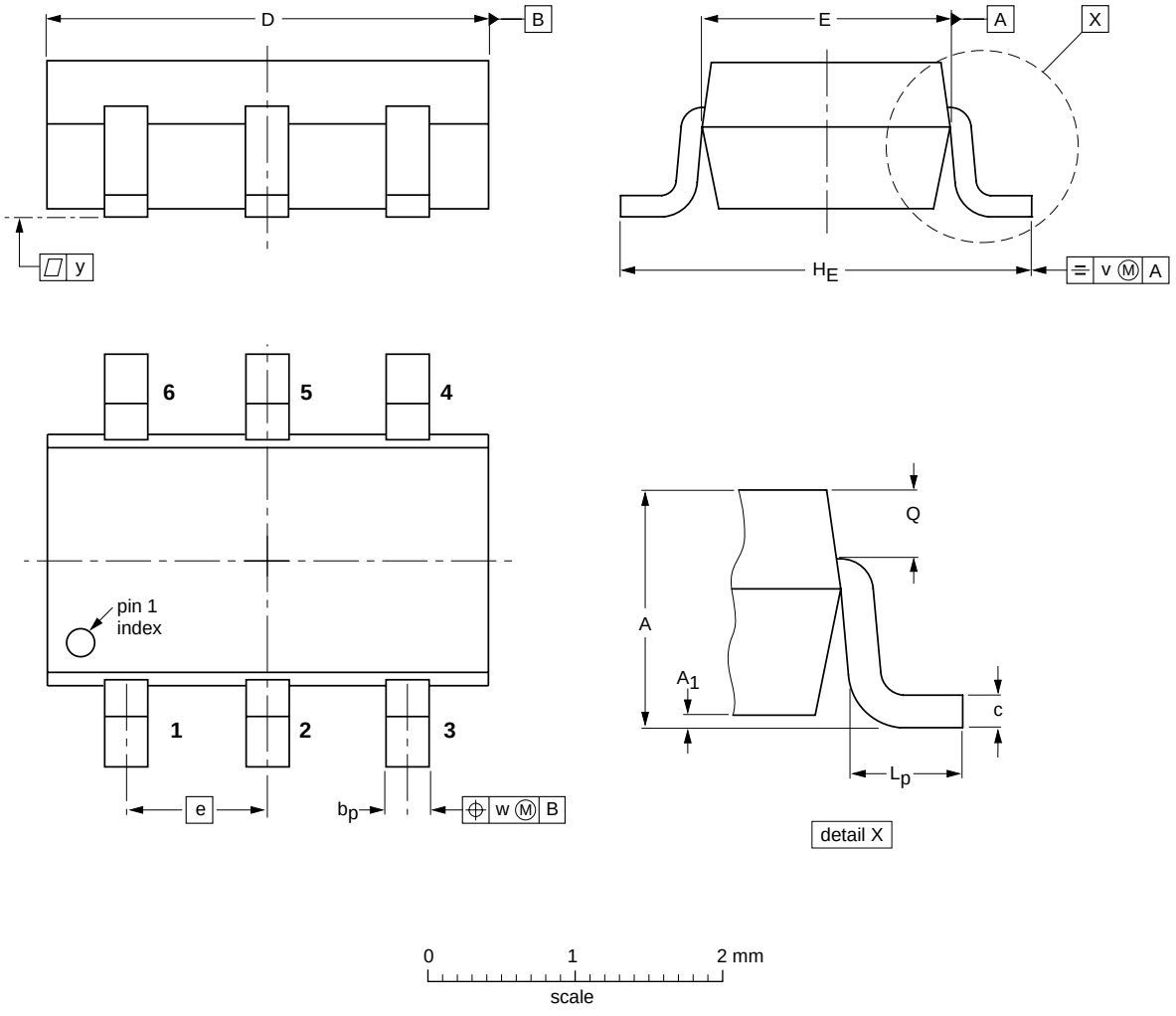
SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
Per transistor					
I_{CBO}	collector-base cut-off current	V_{CB} = −30 V; I_E = 0	−	−100	nA
		V_{CB} = −30 V; I_E = 0; T_j = 150 °C	−	−10	μA
I_{EBO}	emitter-base cut-off current	V_{EB} = −4 V; I_C = 0	−	−100	nA
h_{FE}	DC current gain	V_{CE} = −6 V; I_C = −1 mA	120	−	
V_{CEsat}	collector-emitter saturation voltage	I_C = −50 mA; I_B = −5 mA; note 1	−	−200	mV
C_c	collector capacitance	V_{CB} = −12 V; I_E = I_e = 0; f = 1 MHz	−	2.2	pF
f_T	transition frequency	V_{CE} = −12 V; I_C = −2 mA; f = 100 MHz	100	−	MHz

Note

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

PACKAGE OUTLINE

Plastic surface mounted package; 6 leads **SOT457**



DIMENSIONS (mm are the original dimensions)

UNIT	A	A_1	b_p	c	D	E	e	H_E	L_p	Q	v	w	y
mm	1.1 0.9	0.1 0.013	0.40 0.25	0.26 0.10	3.1 2.7	1.7 1.3	0.95	3.0 2.5	0.6 0.2	0.33 0.23	0.2	0.2	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT457			SC-74			~~97-02-28~~ 01-05-04

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.

Notes

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This data sheet was changed to reflect the new company name NXP Semiconductors. No changes were made to the content, except for the legal definitions and disclaimers.

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