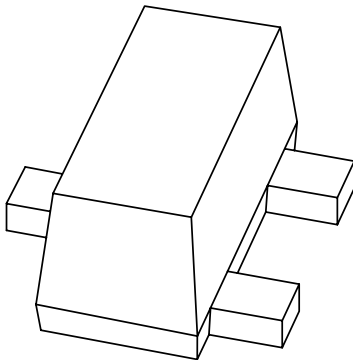


DATA SHEET



PDATA143TEF

PNP resistor-equipped transistor;
R1 = 4.7 k Ω , R2 = open

Product specification

2002 Jan 15

PNP resistor-equipped transistor;
R1 = 4.7 kΩ, R2 = open

PDTA143TEF

FEATURES

- Built-in bias resistors
- Simplification of circuit design
- Reduces number of components and required PCB area.

APPLICATIONS

- Especially suitable for space reduction in interface and driver circuits
- Inverter configurations without use of external resistors.

DESCRIPTION

PNP resistor equipped transistor in a SOT490 (SC-89) plastic package.

MARKING

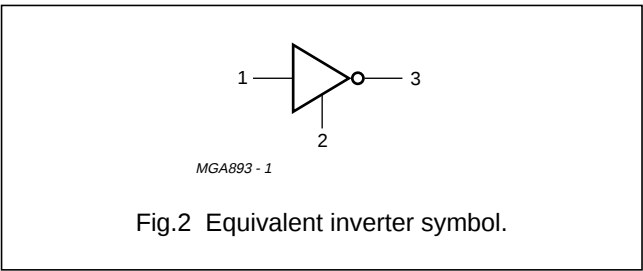
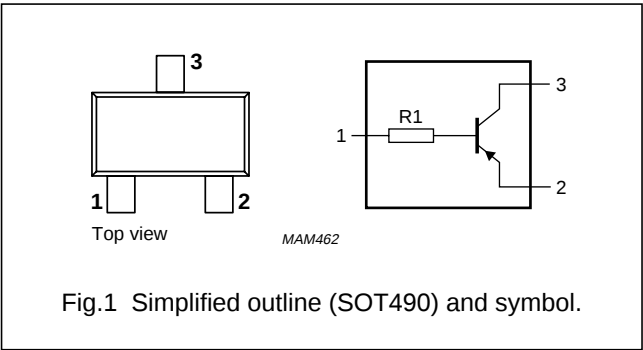
TYPE NUMBER	MARKING CODE
PDTA143TEF	10

QUICK REFERENCE DATA

SYMBOL	PARAMETER	MAX.	UNIT
V _{CEO}	collector-emitter voltage	−50	V
I _O	output current (DC)	−100	mA
R1	bias resistor	4.7	kΩ
R2	open	−	−

PINNING

PIN	DESCRIPTION
1	base/input
2	emitter/ground (+)
3	collector/output



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LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V _{CBO}	collector-base voltage	open emitter	–	–50	V
V _{CEO}	collector-emitter voltage	open base	–	–50	V
V _{EBO}	emitter-base voltage	open collector	–	–10	V
V _i	input voltage		–	+10	V
	positive			–40	V
I _o	output current (DC)		–	–100	mA
	peak collector current			–100	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

- For mounting conditions, see “Thermal considerations and footprint design for SOT490 in the SC18 Data Handbook”.

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R _{th j-a}	thermal resistance from junction to ambient	in free air; note 1	500	K/W

Note

- For mounting conditions, see “Thermal considerations and footprint design for SOT490 in the SC18 Data Handbook”.

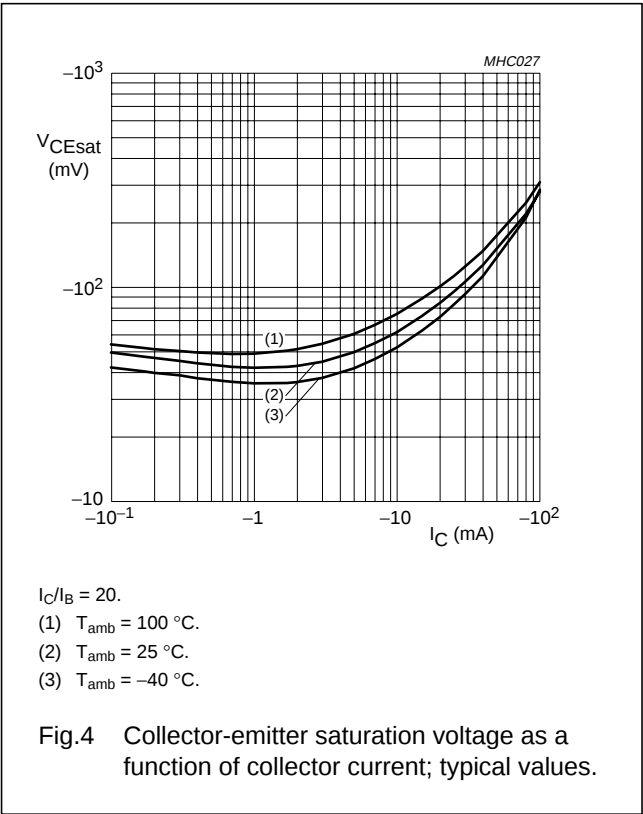
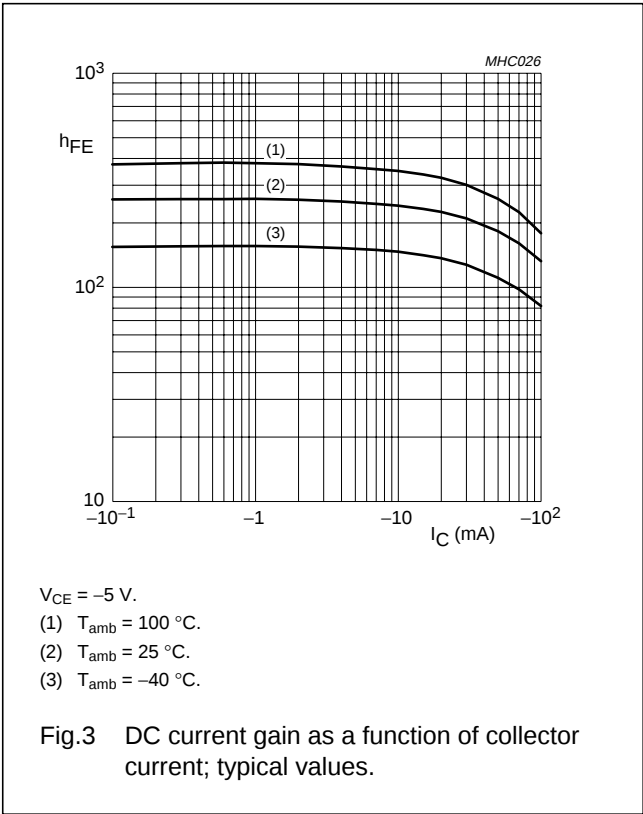
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CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I _{CBO}	collector-base cut-off current	V _{CB} = -50 V; I _E = 0	–	–	-100	nA
I _{CEO}	collector-emitter cut-off current	V _{CE} = -30 V; I _B = 0	–	–	-1	μA
		V _{CE} = -30 V; I _B = 0; T _j = 150 °C	–	–	-50	μA
I _{EBO}	emitter-base cut-off current	V _{EB} = -5 V; I _C = 0	–	–	-100	nA
h _{FE}	DC current gain	V _{CE} = -5 V; I _C = -1 mA	200	–	–	
V _{CEsat}	collector-emitter saturation voltage	I _C = -5 mA; I _B = -0.25 mA	–	–	-100	mV
R1	input resistor		3.3	4.7	6.1	kΩ
C _c	collector capacitance	I _E = i _e = 0; V _{CB} = -10 V; f = 1 MHz	–	–	3	pF



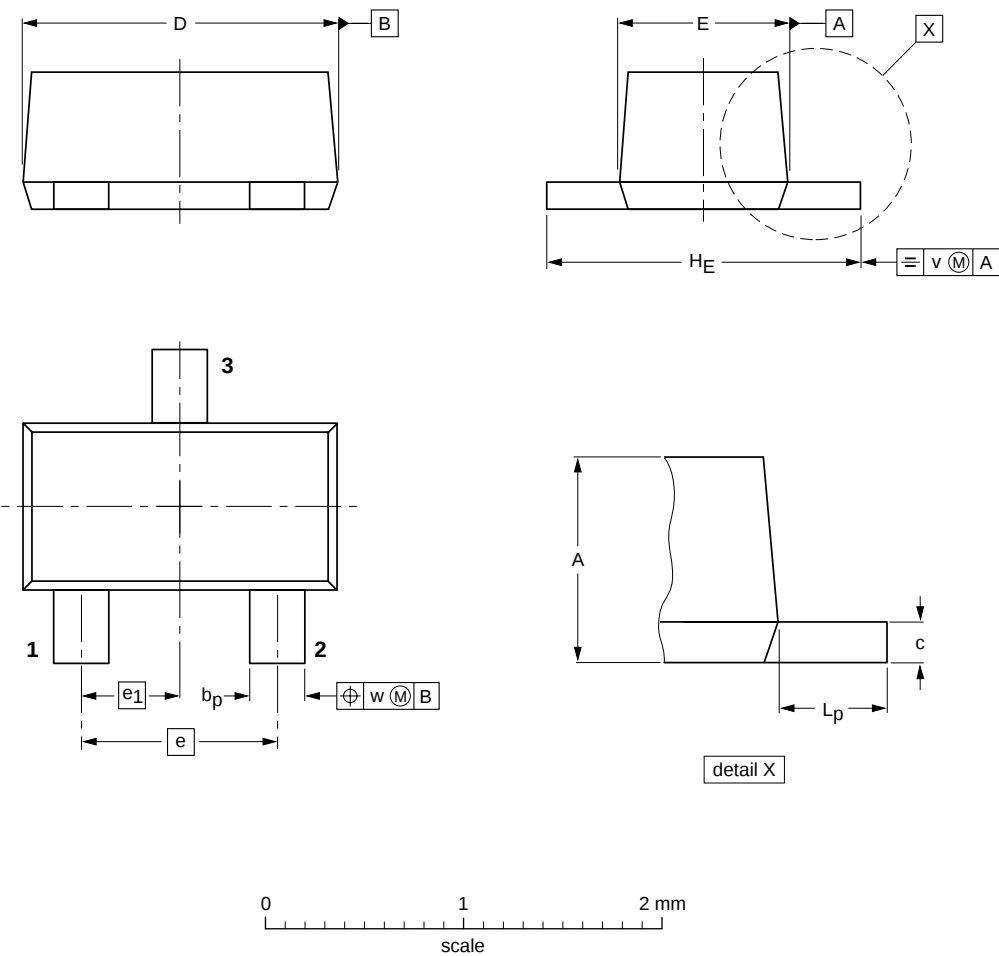
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PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT490



DIMENSIONS (mm are the original dimensions)

UNIT	A	b _p	c	D	E	e	e ₁	H _E	L _p	v	w
mm	0.8 0.6	0.33 0.23	0.2 0.1	1.7 1.5	0.95 0.75	1.0	0.5	1.7 1.5	0.5 0.3	0.1	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT490			SC-89			98-10-23

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DATA SHEET STATUS

DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITIONS
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Preliminary data	Qualification	This data sheet contains data from the preliminary specification. Supplementary data will be published at a later date. Philips Semiconductors reserves the right to change the specification without notice, in order to improve the design and supply the best possible product.
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