

PNP high-voltage transistor

BSP16

FEATURES

- High voltage (max. 350 V).

APPLICATIONS

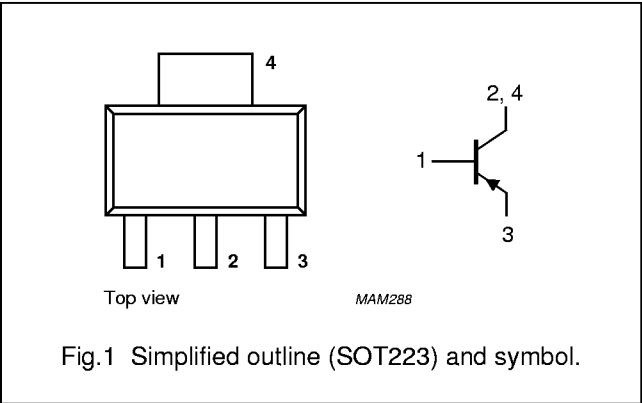
- Switching and amplification
- Especially used in telephony and automotive applications.

DESCRIPTION

PNP high-voltage transistor in a SOT223 plastic package.
NPN complements: BSP19 and BSP20.

PINNING

PIN	DESCRIPTION
1	base
2, 4	collector
3	emitter



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	—	–350	V
V _{CEO}	collector-emitter voltage	open base	—	–300	V
V _{EBO}	emitter-base voltage	open collector	—	–6	V
I _C	collector current (DC)		—	–200	mA
I _B	base current (DC)		—	–200	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C; note 1	—	1.28	W
T _{stg}	storage temperature		–65	+150	°C
T _j	junction temperature		—	150	°C
T _{amb}	operating ambient temperature		–65	+150	°C

Note

1. Device mounted on printed-circuit board, single sided copper, tinplated, mounting pad for collector 1 cm².
For other mounting conditions, see “Thermal considerations for SOT223 in the General Part of associated Handbook”.

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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	97	K/W
$R_{th\ j-s}$	thermal resistance from junction to soldering point		16	K/W

Note

1. Device mounted on printed-circuit board, single sided copper, tinplated, mounting pad for collector 1 cm².
For other mounting conditions, see *"Thermal considerations for SOT223 in the General Part of associated Handbook"*.

CHARACTERISTICS

$T_j = 25\text{ }^{\circ}\text{C}$ unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I_{CBO}	collector cut-off current	$I_E = 0$; $V_{CB} = -280\text{ V}$	–	–100	nA
I_{EBO}	emitter cut-off current	$I_C = 0$; $V_{EB} = -6\text{ V}$	–	–100	nA
h_{FE}	DC current gain	$I_C = -50\text{ mA}$; $V_{CE} = -10\text{ V}$	30	120	
V_{CEsat}	collector-emitter saturation voltage	$I_C = -50\text{ mA}$; $I_B = -5\text{ mA}$	–	–2	V
C_c	collector capacitance	$I_E = I_e = 0$; $V_{CB} = -10\text{ V}$; $f = 1\text{ MHz}$	–	15	pF
f_T	transition frequency	$I_C = -10\text{ mA}$; $V_{CE} = -10\text{ V}$; $f = 100\text{ MHz}$	15	–	MHz

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PACKAGE OUTLINE

Plastic surface mounted package; collector pad for good heat transfer; 4 leads

SOT223

