

PNP high-voltage transistors

BF470; BF472

FEATURES

- Low feedback capacitance.

APPLICATIONS

- Class-B video output stages in television receivers and for high-voltage IF output stages.

DESCRIPTION

PNP transistors in a TO-126; SOT32 plastic package.
NPN complements: BF469 and BF471.

PINNING

PIN	DESCRIPTION
1	emitter
2	collector, connected to mounting base
3	base

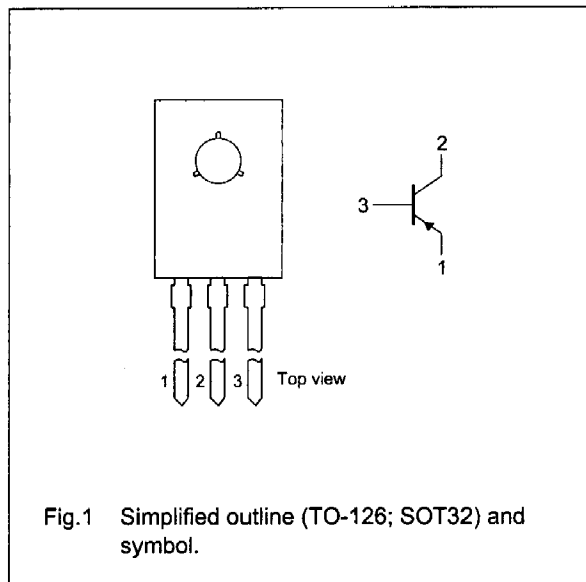
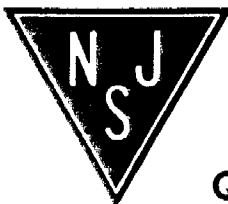


Fig.1 Simplified outline (TO-126; SOT32) and symbol.

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CBO}	collector-base voltage	open emitter			
	BF470		-	-250	V
	BF472		-	-300	V
V_{CEO}	collector-emitter voltage	open base			
	BF470		-	-250	V
	BF472		-	-300	V
I_{CM}	peak collector current		-	-100	mA
P_{tot}	total power dissipation	$T_{mb} \leq 114^\circ C$	-	1.8	W
h_{FE}	DC current gain	$I_C = -25\text{ mA}; V_{CE} = -20\text{ V}$	50	-	
C_{re}	feedback capacitance	$I_C = I_c = 0; V_{CE} = -30\text{ V}; f = 1\text{ MHz}$	-	1.8	pF
f_T	transition frequency	$I_C = -10\text{ mA}; V_{CE} = -10\text{ V}; f = 100\text{ MHz}$	60	-	MHz



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Quality Semi-Conductors

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LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V _{CB0}	collector-base voltage	open emitter			
	BF470		–	–250	V
	BF472		–	–300	V
V _{CEO}	collector-emitter voltage	open base			
	BF470		–	–250	V
	BF472		–	–300	V
V _{EBO}	emitter-base voltage	open collector	–	–5	V
I _C	collector current (DC)		–	–50	mA
I _{CM}	peak collector current		–	–100	mA
I _{BM}	peak base current		–	–50	mA
P _{tot}	total power dissipation	T _{mb} ≤ 114 °C	–	1.8	W
T _{stg}	storage temperature		–65	+150	°C
T _j	junction temperature		–	150	°C
T _{amb}	operating ambient temperature		–65	+150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R _{th j-a}	thermal resistance from junction to ambient	in free air; note 1	100	K/W
R _{th j-mb}	thermal resistance from junction to mounting base		20	K/W

Note

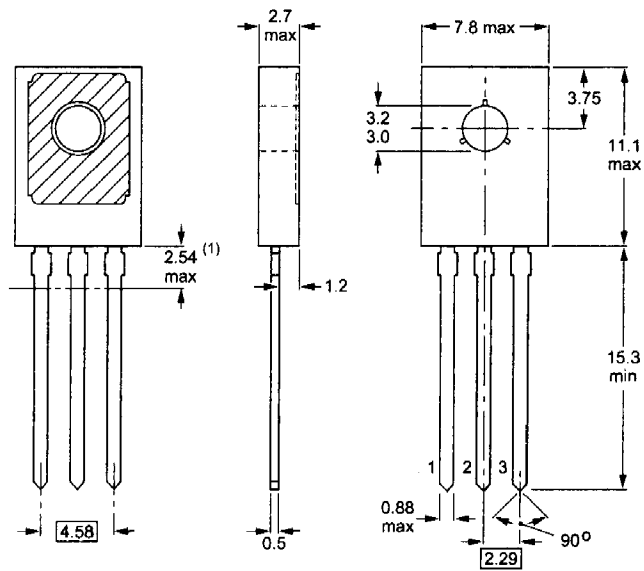
1. Transistor mounted on a printed-circuit board, maximum lead length 4 mm; mounting pad for collector lead minimum 10 × 10 mm.

CHARACTERISTICS

T_j = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I _{CBO}	collector cut-off current	I _E = 0; V _{CB} = –200 V	–	–10	nA
		I _E = 0; V _{CB} = –200 V; T _j = 150 °C	–	–10	μA
I _{EBO}	emitter cut-off current	I _C = 0; V _{EB} = –5 V	–	–50	nA
h _{FE}	DC current gain	I _C = –25 mA; V _{CE} = –20 V	50	–	
V _{CEsat}	collector-emitter saturation voltage	I _C = –30 mA; I _B = –5 mA	–	–600	mV
C _{re}	feedback capacitance	I _C = I _c = 0; V _{CE} = –30 V; f = 1 MHz	–	1.8	pF
f _r	transition frequency	I _C = –10 mA; V _{CE} = –10 V; f = 100 MHz	60	–	MHz

PACKAGE OUTLINE



Dimensions in mm.

(1) Terminal dimensions within this zone are uncontrolled.

Fig.2 TO-126; SOT32.