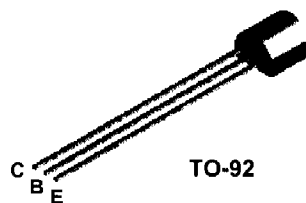


PN4250A



PNP General Purpose Amplifier

This device is designed for use as general purpose amplifiers and switches requiring collector currents to 300 mA. Sourced from Process 68. See PN200 for characteristics.

Absolute Maximum Ratings* TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CE0}	Collector-Emitter Voltage	60	V
V_{CB0}	Collector-Base Voltage	60	V
V_{EB0}	Emitter-Base Voltage	5.0	V
I_C	Collector Current - Continuous	500	mA
T_J, T_{stg}	Operating and Storage Junction Temperature Range	-55 to +150	°C

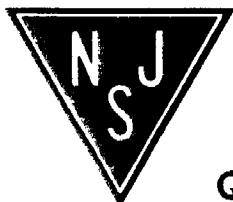
*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics TA = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		PN4250A	
P_D	Total Device Dissipation Derate above 25°C	625 5.0	mW mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	83.3	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	200	°C/W



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

PNP General Purpose Amplifier

(continued)

Electrical Characteristics

TA = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
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OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage*	$I_C = 5.0 \text{ mA}, I_B = 0$	60		V
$V_{(BR)CES}$	Collector-Emitter Breakdown Voltage*	$I_C = 10 \text{ } \mu\text{A}, I_B = 0$	60		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = 10 \text{ } \mu\text{A}, I_E = 0$	60		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 10 \text{ } \mu\text{A}, I_C = 0$	5.0		V
I_{CBO}	Collector-Cutoff Current	$V_{CB} = 5.0 \text{ V}, I_E = 0$		10	nA
I_{EBO}	Emitter-Cutoff Current	$V_{EB} = 3.0 \text{ V}, I_C = 0$		20	nA

ON CHARACTERISTICS*

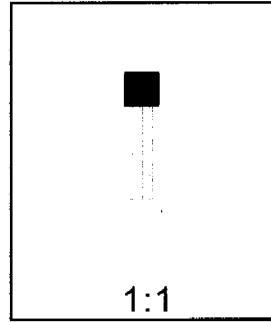
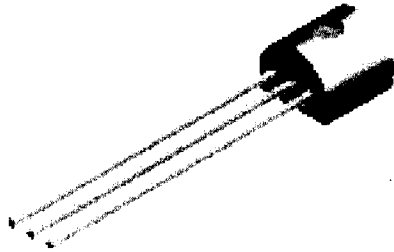
h_{FE}	DC Current Gain	$V_{CE} = 5.0 \text{ V}, I_C = 100 \text{ } \mu\text{A}$	250	700	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 10 \text{ mA}, I_B = 0.5 \text{ mA}$		0.25	V

SMALL SIGNAL CHARACTERISTICS

C_{ob}	Output Capacitance	$V_{CB} = 5.0 \text{ V}, f = 1.0 \text{ MHz}$		6.0	pF
h_{fe}	Small-signal Current Gain	$V_{CE} = 5.0 \text{ V}, I_C = 1.0 \text{ mA},$ $f = 1.0 \text{ kHz}$	250	800	
h_{ie}	Input Impedance		6.0	20	k Ω
h_{oe}	Output Admittance		5.0	50	μhos
h_{re}	Voltage Feedback Ratio			10	$\times 10^{-4}$
NF	Noise Figure	$V_{CE} = 5.0 \text{ V}, I_C = 250 \text{ } \mu\text{A},$ $R_S = 1.0 \text{ k}\Omega, f = 1.0 \text{ kHz},$ $B_W = 150 \text{ Hz}$ $V_{CE} = 5.0 \text{ V}, I_C = 20 \text{ } \mu\text{A},$ $R_S = 10 \text{ k}\Omega, f = 1.0 \text{ kHz},$ $B_W = 150 \text{ Hz}$		2.0	dB
				2.0	dB

*Pulse Test: Pulse Width $\leq 300 \text{ } \mu\text{s}$, Duty Cycle $\leq 2.0\%$

TO-92 (FS PKG Code 92, 94, 96)



Scale 1:1 on letter size paper

Dimensions shown below are in:
inches [millimeters]

Part Weight per unit (gram): 0.1977

TO-92 (92,94,96)

PIN	92		94		96	
	B	F	B	F	B	F
1	E	D	E	D	B	S
2	B	S	C	G	E	D
3	C	G	B	S	C	G

