

TN5320A

PNP High Voltage Amplifier

- This device is designed for general purpose medium power amplifiers and switches requiring collector currents to 1.5 A.
- Sourced from Process 34.



TO-226

1. Collector 2. Base 3. Emitter

Absolute Maximum Ratings* $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	75	V
V_{CEO}	Collector-Emitter Voltage	75	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current - Continuous	500	mA
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 ~ +150	$^\circ\text{C}$

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

NOTES:

- 1) These rating are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.
- 3) All voltages (V) and currents (A) are negative polarity for PNP transistors.

Thermal Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation Derate above 25°C	1.0 8.0	mW mW/ $^\circ\text{C}$
$R_{\theta JC}$	Thermal Resistance, Junction to Case	125	$^\circ\text{C/W}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	50	$^\circ\text{C/W}$

Electrical Characteristics* $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
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Off Characteristics

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 100\text{mA}$, $I_B = 0$	75		V
I_{CEX}	Collector Cut-off Current	$V_{CE} = 100\text{ V}$, $V_{BE} = 1.5\text{ V (rev.)}$		100	μA
		$V_{CE} = 70\text{ V}$, $V_{BE} = 1.5\text{ V (rev.)}$ $T = +150^\circ\text{C}$		5	mA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 7.0\text{ V}$		100	μA

On Characteristics

h_{FE}	DC Current Gain	$V_{CE} = 4.0\text{ V}$, $I_C = 0.5\text{ mA}$, $V_{CE} = 2.0\text{ V}$, $I_C = 1.0\text{ mA}$,	30 10	130	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 500\text{ mA}$, $I_B = 50\text{ mA}$		0.5	V
$V_{BE(on)}$	Base-Emitter Voltage	$V_{CE} = 4.0\text{ V}$, $I_C = 500\text{ mA}$		1.1	V

* Pulse Test: Pulse Width $\leq 300\text{ms}$, Duty Cycle = 2%**NOTES:**

1) All voltages (V) and currents (A) are negative polarity for PNP transistors.

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