

PN3569

NPN General Purpose Amplifier

• This device is designed for use at general purpose amplifiers and switches requiring collecor currents to 300mA.



1. Emitter 2. Base 3. Collector

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

Symbol	Parameter	Value	Units
V _{CEO}	Collector-Emitter Voltage	40	V
V _{CBO}	Collector-Base Voltage	80	V
V _{EBO}	Emitter-Base Voltage	5.0	V
I _C	Collector Current - Continuous	500	mA
T _J , T _{STG}	Operating and Storage Junction Temperature Range	- 55 ~ 150	°C

^{*} These ratings are limiting values above whitch the serviceability of any semiconductor device may be impaird.

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

Electrical Characteristics T_a=25°C unless otherwise noted

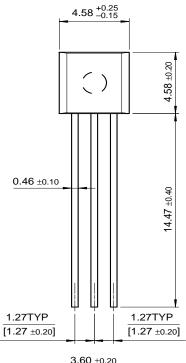
Symbol	Parameter	Test Condition	Min.	Max.	Units
Off Characteristics					•
V _{(BR)CEO}	Collector-Emitter Sustaining Voltage *	$I_C = 30\mu A, I_B = 0$	40		V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	$I_C = 100\mu A, I_E = 0$	80		
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	$I_E = 10\mu A, I_C = 0$	5.0		V
I _{CBO}	Collector Cutoff Current	$V_{CB} = 40V, I_{E} = 0$		50	nA
I _{EBO}	Emitter Cut-off Current	$V_{EB} = 4.0V, I_{C} = 0$		25	nA
On Characte	eristics				•
h _{FE}	DC Current Gain	V _{CE} = 1V, I _C = 150mA	100	300	
		$V_{CE} = 1V, I_{C} = 30mA$	100		
V _{CE} (sat)	Collector-Emitter Saturation Voltage	$I_C = 150 \text{mA}, I_B = 15 \text{mA}$		0.25	V
V _{BE} (on)	Base-Emitter On Voltage	I _C = 150mA, V _{CE} = 1V		1.1	V
Small Signa	I Characteristics				•
h _{fe}	Small Signal current Gain	I _C = 50mA, V _{CE} = 10V, f = 10MHz	3.0	30	
Pulse Test: Pulse	Width ≤ 300μs, Duty Cycle ≤ 2.0%				•

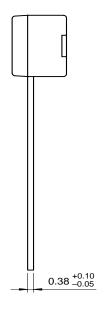
Thermal Characteristics T_a=25°C unless otherwise noted

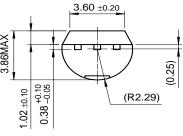
Symbol	Parameter	Max.	Units
P _D	Total Device Dissipation	625	mW
	Derate above 25°C	5.0	mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	83.3	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	200	°C/W

Package Dimensions

TO-92







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