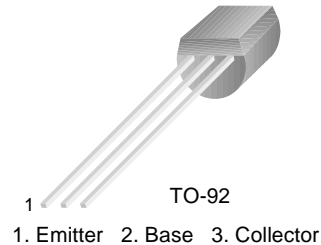


# PN3566

## NPN General Purpose Amplifier

- This device is for use as a medium amplifier and switch requiring collector currents up to 300mA.
- Sourced from process 19.



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

Symbol	Parameter	Value	Units
$V_{CEO}$	Collector-Emitter Voltage	30	V
$V_{CBO}$	Collector-Base Voltage	40	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current - Continuous	600	mA
$T_J, T_{STG}$	Operating and Storage Junction Temperature Range	- 55 ~ 150	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
<b>Off Characteristics</b>						
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage *	$I_C = 30\text{mA}, I_B = 0$	30			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = 100\mu\text{A}, I_E = 0$	40			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 10\mu\text{A}, I_C = 0$	5			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = 20\text{V}, I_E = 0$			50	nA
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = 5\text{V}, I_C = 0$			10	$\mu\text{A}$
<b>On Characteristics</b>						
$h_{FE}$	DC Current Gain	$V_{CE} = 10\text{V}, I_C = 2.0\text{mA}$ $V_{CE} = 10\text{V}, I_C = 10\text{mA}$	80 150		600	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage *	$I_C = 100\text{mA}, I_B = 10\text{mA}$			1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE} = 1\text{V}, I_C = 100\text{mA}$			0.9	V
<b>Small Signal Characteristics</b>						
$C_{obo}$	Output Capacitance	$V_{CB} = 10\text{V}, I_E = 0$			25	pF

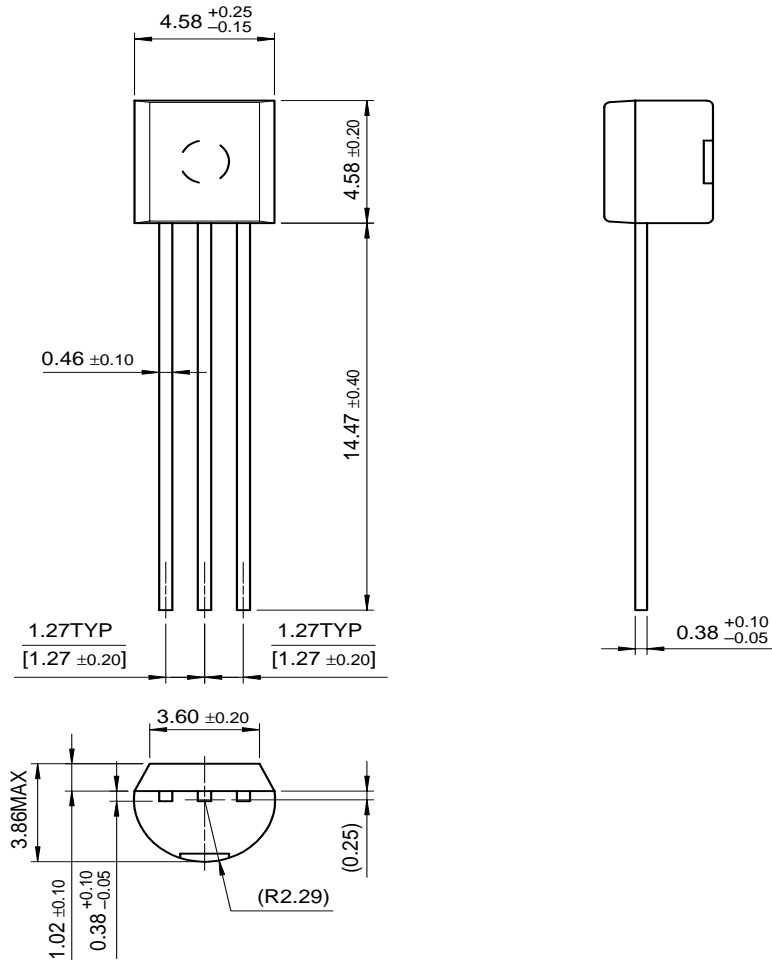
\* Pulse Test: Pulse Width  $\leq 300\text{ms}$ , Duty Cycle  $\leq 2.0\%$

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

Symbol	Parameter	Max.	Units
$P_D$	Total Device Dissipation Derate above $25^\circ\text{C}$	625 5	mW mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	83.3	$^\circ\text{C}/\text{W}$
$R_{\theta JC}$	Thermal Resistance, Junction to Case	200	$^\circ\text{C}/\text{W}$

# Package Dimensions

## TO-92



Dimensions in Millimeters

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The Power Franchise <sup>®</sup>		PACMAN <sup>TM</sup>	SMART START <sup>TM</sup>	
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