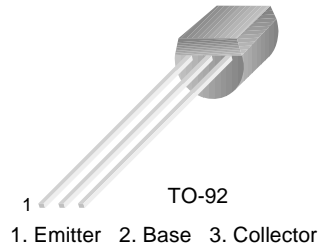


PN3566

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
Off Characteristics						
$V_{(BR)CEO}$	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	μA
On Characteristics						
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
Small Signal Characteristics						
C_{obo}	Output Capacitance	$V_{CB} = 10\text{V}, I_E = 0$			25	pF

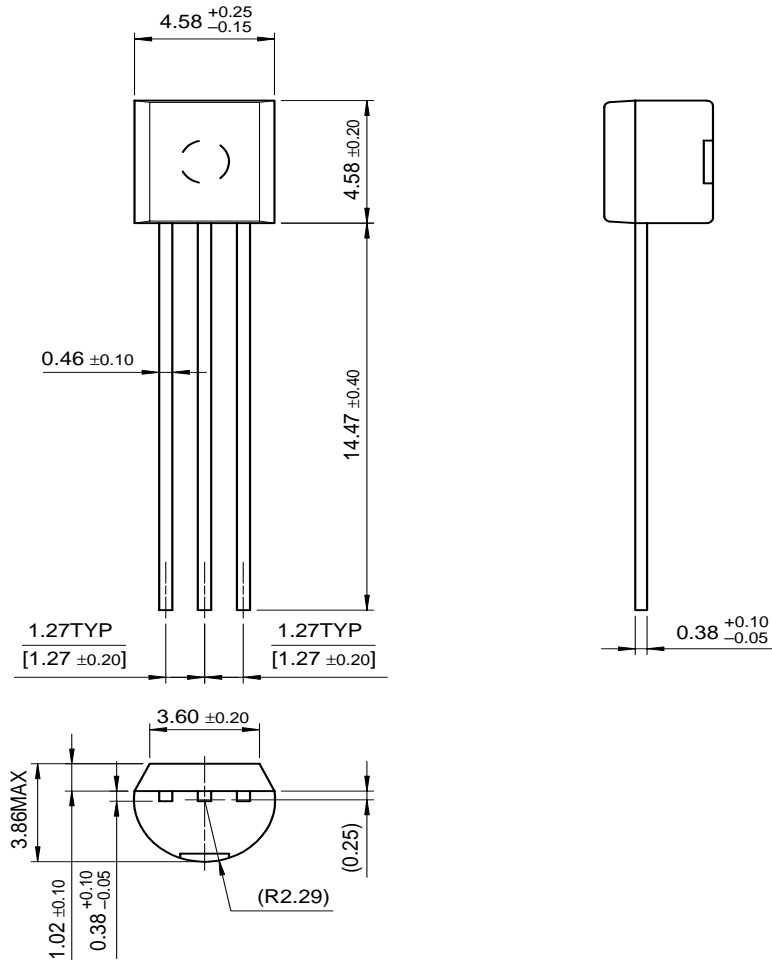
* Pulse Test: Pulse Width $\leq 300\text{ms}$, Duty Cycle $\leq 2.0\%$

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

Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation Derate above 25°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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