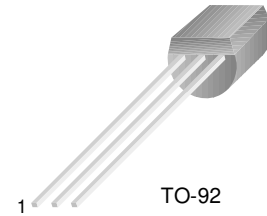


# MPS6521

## NPN General Purpose Amplifier

- This device is designed for general purpose amplifier applications at collector to 300mA.
- Sourced from process 10.



1. Emitter 2. Base 3. Collector

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

Symbol	Parameter	Value	Units
$V_{CEO}$	Collector-Emitter Voltage	25	V
$V_{CBO}$	Collector-Base Voltage	40	V
$V_{EBO}$	Emitter-Base Voltage	4.0	V
$I_C$	Collector Current - Continuous	100	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.	Max.	Units
<b>Off Characteristics</b>					
$V_{(BR)CEO}$	Collector-Emitter Sustaining Voltage *	$I_C = 500\mu\text{A}, I_B = 0$	25		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 10\mu\text{A}, I_C = 0$	4		V
$I_{CBO}$	Emitter Cutoff Current	$V_{CB} = 30\text{V}, I_E = 0$		50	nA
<b>On Characteristics</b>					
$h_{FE}$	DC Current Gain	$V_{CE} = 10\text{V}, I_C = 100\mu\text{A}$ $V_{CE} = 10\text{V}, I_C = 2.0\text{mA}$	150 300	600	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 50\text{mA}, I_B = 5.0\text{mA}$		0.5	V

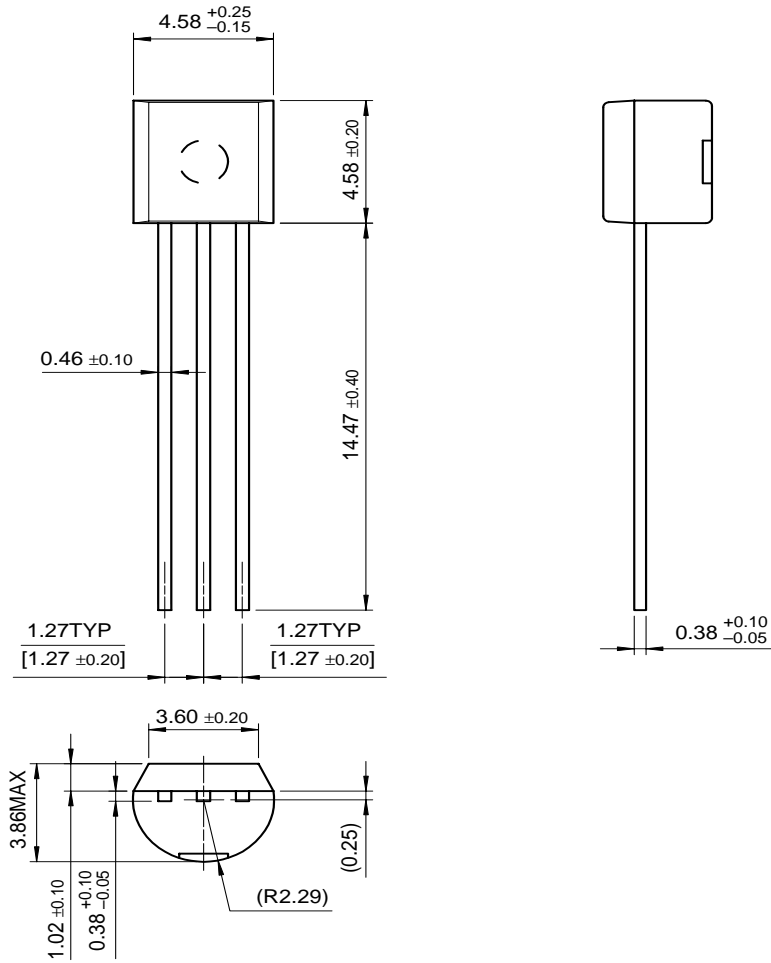
\* Pulse Test: Pulse Width  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 2.0\%$

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

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

# Package Dimensions

## TO-92



Dimensions in Millimeters

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