

MPS6521

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NPN General Purpose Amplifier

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



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
Off Characteristics					
$V_{(BR)CEO}$	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
On Characteristics					
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 Derate above 25°C	625 5	mW mW/ $^\circ\text{C}$
$R_{\theta JC}$	Thermal Resistance, Junction to Case	83.3	$^\circ\text{C/W}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	200	$^\circ\text{C/W}$

Package Dimensions

TO-92



Dimensions in Millimeters

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