

PN2222

FAIRCHILD
SEMICONDUCTOR®

PN2222

General Purpose Transistor



NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	600	mA
P_C	Collector Power Dissipation	625	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

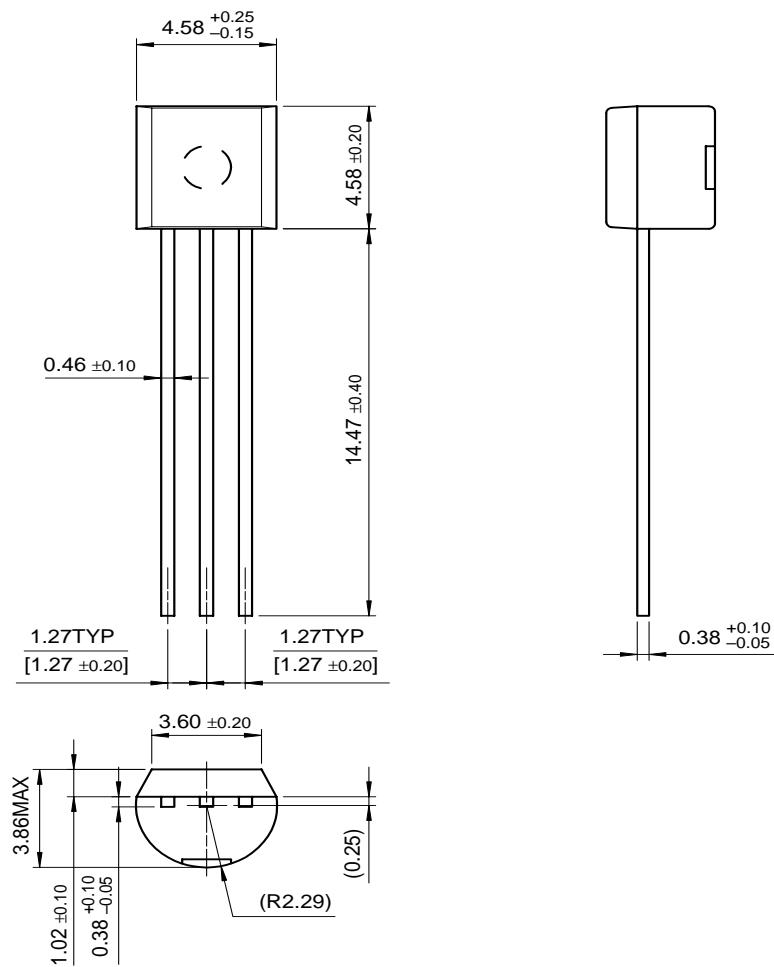
Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C=10\mu\text{A}, I_E=0$	60		V
BV_{CEO}	Collector Emitter Breakdown Voltage	$I_C=10\text{mA}, I_B=0$	30		V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=10\mu\text{A}, I_C=0$	5		V
I_{CBO}	Collector Cut-off Current	$V_{CB}=50\text{V}, I_E=0$		0.01	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB}=3\text{V}, I_C=0$		10	nA
h_{FE}	DC Current Gain	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$ $V_{CE}=10\text{V}, *I_C=150\text{mA}$	35 100	300	
$V_{CE}(\text{sat})$	* Collector-Emitter Saturation Voltage	$I_C=500\text{mA}, I_B=50\text{mA}$		1	V
$V_{BE}(\text{sat})$	* Base-Emitter Saturation Voltage	$I_C=500\text{mA}, I_B=50\text{mA}$		2	V
f_T	Current Gain Bandwidth Product	$V_{CE}=20\text{V}, I_C=20\text{mA}, f=100\text{MHz}$	300		MHz
C_{ob}	Output Capacitance	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		8	pF

* Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

Package Dimensions

TO-92



Dimensions in Millimeters

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