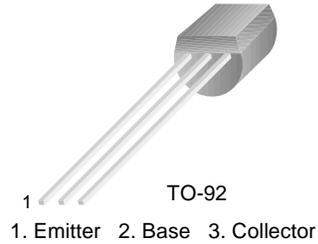


PN2222

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	$^\circ\text{C}$

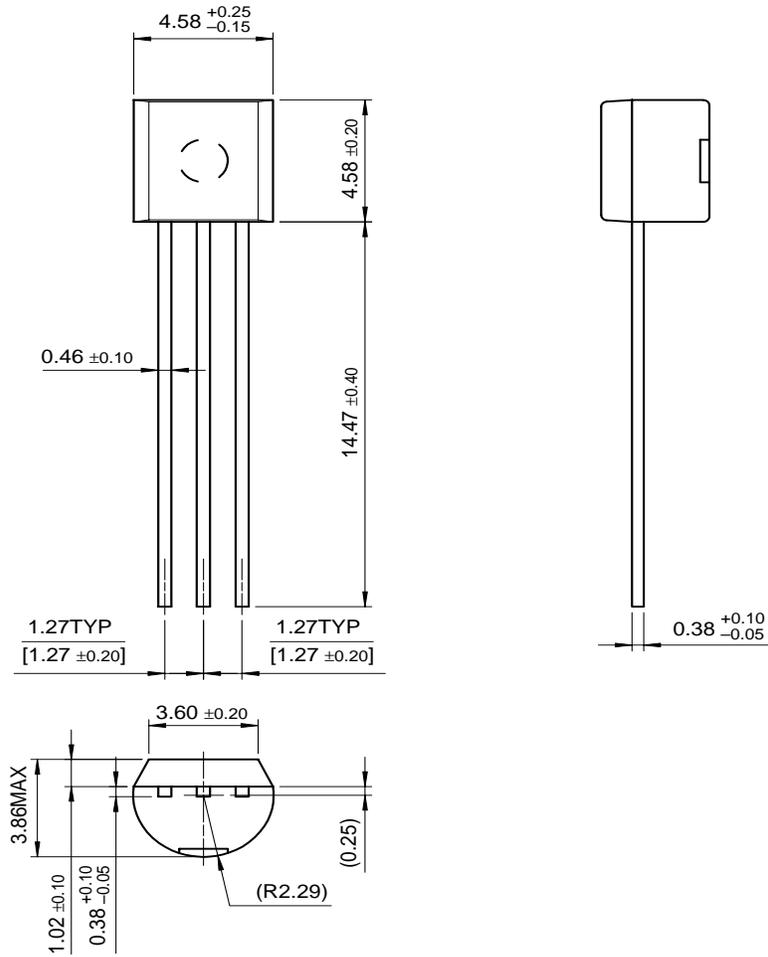
Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

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 μs , Duty Cycle \leq 2%

Package Dimensions

TO-92



Dimensions in Millimeters

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PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

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PN2222

NPN General Purpose Amplifier

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Features

General Purpose Transistor

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BUY

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Product status/pricing/packageing

BUY

Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method	Package Marking Convention**
PN2222BU	Full Production	Full Production	\$0.025	TO-92	3	BULK	Line 1: PN Line 2: 2222 Line 3: -&3
PN2222TA	Full Production	Full Production	\$0.026	TO-92	3	AMMO	Line 1: PN Line 2: 2222 Line 3: -&3
PN2222TAR	Full Production	Full Production	\$0.026	TO-92	3	AMMO	Line 1: PN Line 2: 2222 Line 3: -&3
PN2222TF	Full Production		\$0.026	TO-92	3	TAPE REEL	Line 1: PN Line 2: 2222 Line 3: -&3

							
PN2222TFR	Full Production		\$0.026	TO-92	3	TAPE REEL	Line 1: PN Line 2: 2222 Line 3: -&3
PN2222_J18Z	Full Production		N/A	TO-92	3	BULK	Line 1: \$Y (Fairchild logo) & Z (Asm. Plant Code) & 3 (3-Digit Date Code) Line 2: PN Line 3: 2222
PN2222_J61Z	Full Production		N/A	TO-92	3	BULK	Line 1: \$Y (Fairchild logo) & Z (Asm. Plant Code) & 3 (3-Digit Date Code) Line 2: PN Line 3: 2222

* Fairchild 1,000 piece Budgetary Pricing

** A sample button will appear if the part is available through Fairchild's on-line samples program. If there is no sample button, please contact a [Fairchild distributor](#) to obtain samples



Indicates product with Pb-free second-level interconnect. For more information [click here](#).

Package marking information for product PN2222 is available. [Click here for more information](#).

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Models

Package & leads	Condition	Temperature range	Software version	Revision date
PSPICE				
TO-92-3	Electrical	25°C	N/A	N/A

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Application notes

[AN-2001: AN-2001 A Tutorial for In-Circuit Programming the ACEx\(TM\) Family of Microcontrollers](#) (783 K) Jul 27, 2007

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Qualification Support

Click on a product for detailed qualification data

Product
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