

NPN Epitaxial Silicon Transistor

General Purpose Transistor

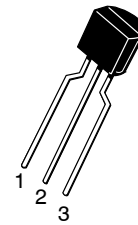
PN2222

- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

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

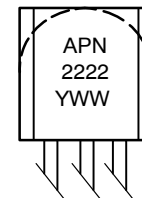
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.



TO-92-3
CASE 135AR

1. Emitter
2. Base
3. Collector

MARKING DIAGRAM



PN2222 = Specific Device Code
A = Assembly Location
Y = Year
WW = Work Week

ORDERING INFORMATION

See detailed ordering and shipping information on page 2 of this data sheet.

PN2222

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_{CBO}	Collector–Base Breakdown Voltage	$I_C = 10\ \mu\text{A}$, $I_E = 0$	60			V
V_{CEO}	Collector–Emitter Breakdown Voltage	$I_C = 10\ \text{mA}$, $I_B = 0$	30			V
V_{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	$V_{CE} = 10\ \text{V}$, $I_C = 0.1\ \text{mA}$	35			
		$V_{CE} = 10\ \text{V}$, $I_C = 150\ \text{mA}^*$	100		300	
$V_{CE(sat)}$	Collector–Emitter Saturation Voltage*	$I_C = 500\ \text{mA}$, $I_B = 50\ \text{mA}$			1	V
$V_{BE(sat)}$	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

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

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

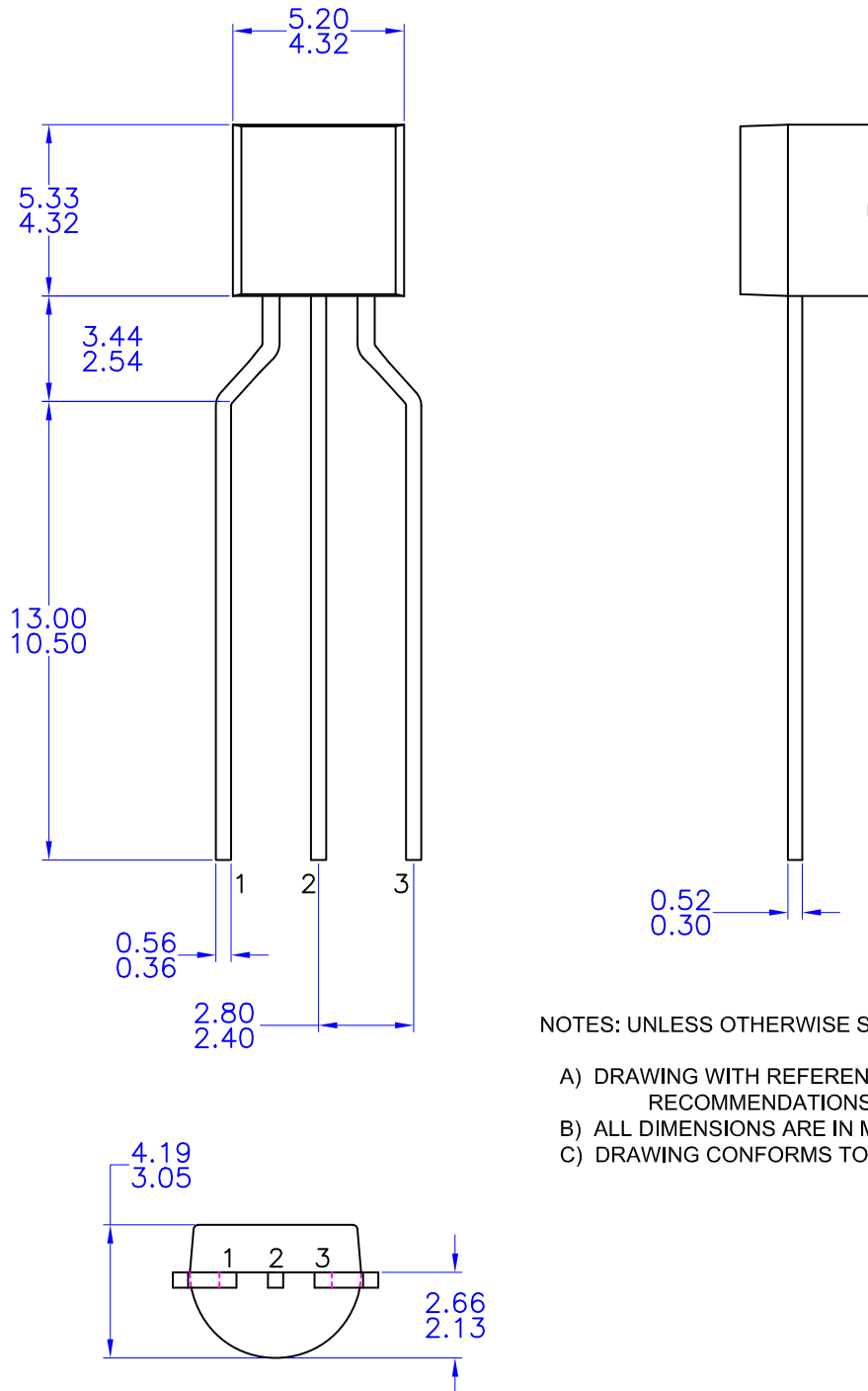
ORDERING INFORMATION

Part Number	Top Mark	Package	Shipping [†]
PN2222TA	PN2222	TO–92–3 (Pb–Free)	2,000 Units/ Fan–Fold
PN2222TF	PN2222	TO–92–3 (Pb–Free)	2,000 Units/ Tape & Reel

[†]For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

TO-92 3 4.83x4.76 LEADFORMED
CASE 135AR
ISSUE O

DATE 30 SEP 2016



NOTES: UNLESS OTHERWISE SPECIFIED

- A) DRAWING WITH REFERENCE TO JEDEC TO-92 RECOMMENDATIONS.
- B) ALL DIMENSIONS ARE IN MILLIMETERS.
- C) DRAWING CONFORMS TO ASME Y14.5M-1994

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