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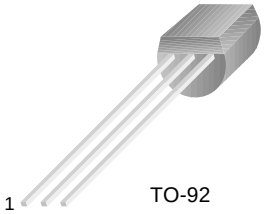
BC214

PNP General Purpose Amplifier

- This device is deisgned for use as general purpose amplifiers and switches requiring collector currents to 300mA.
- Sourced from process 68.



TO-92

1. Collector 2. Base 3. Emitter

Absolute Maximum Ratings* T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	-30	V
V_{CBO}	Collector-Base Voltage	-45	V
V_{EBO}	Emitter-Base Voltage	-5.0	V
I_C	Collector Current (DC)- - Continuous	-500	mA
T_J, T_{STG}	Operating and Storage Junction Temperature Range	- 55 ~ 150	°C

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:
1) These ratings are based on a maximum junction temperature of 150 degrees C.
2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
Off Characteristics					
$V_{(BR)CEO}$	Collector-Emitter Voltage	I_C = -2mA, I_B = 0	-30		V
$V_{(BR)CBO}$	Collector-Base Voltage	I_C = -10µA, I_E = 0	-45		V
$V_{(BR)EBO}$	Emitter-Base Voltage	I_E = -10µA, I_C = 0	-5.0		V
I_{CBO}	Collector Cut-off Current	V_{CB} = -30V, I_E = 0		-15	nA
I_{EBO}	Emitter Cut-off Current	V_{EB} = -4V, I_C = 0		-15	nA
On Characteristics *					
h_{FE}	DC Current Gain	V_{CE} = -5V, I_C = -10µA V_{CE} = -5V, I_C = -2mA V_{CE} = -5V, I_C = -100mA	100 140 120	 400 	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = -10mA, I_B = -0.5mA I_C = -100mA, I_B = -5mA		-0.25 -0.6	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = -100mA, I_B = -5mA		-1.1	V
V_{BE}(on)	Base-Emitter On Voltage	V_{CE} = -5V, I_C = -2mA	-0.6	-0.72	V
Small Signal Characteristics					
f_T	Current gain Bandwidth Product	V_{CE} = -5V, I_C = -10mA f = 100MHz	200		MHz
NF	Noise Figure	V_{CE} = -5V, I_C = -200µA R_G = 2kΩ, f = 15.7KHz		2.0	dB
h_{fe}	Small Signal Current Gain	I_C = -2mA, V_{CE} = -5V f = 1KHz	140	600	
C_{OB}	Output Capacitance	V_{CB} = -10V, f = 1MHz		10	pF

* Pulse Test: Pulse Width ≤ 300µs, Duty Cycle ≤ 2.0%

Thermal Characteristics T_A=25°C unless otherwise noted

Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation Derate above 25°C	625 5.0	mW mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	83.3	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	200	°C/W

Package Dimensions

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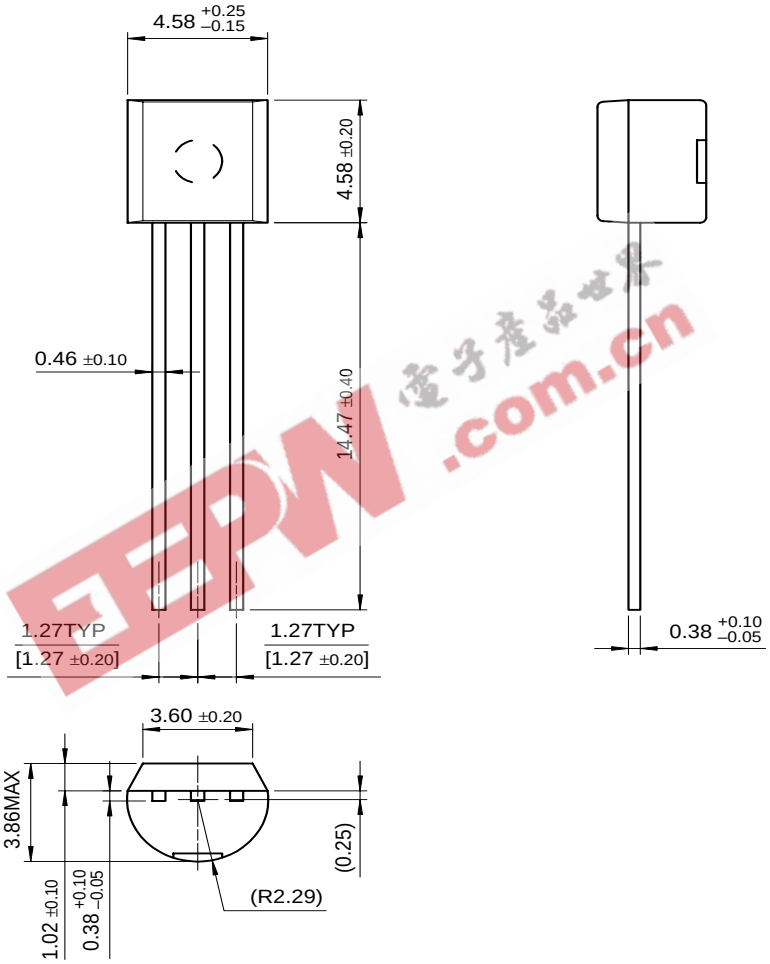

Dimensions in Millimeters

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