

SEMICONDUCTOR

BC214LC

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.



1. Emitter 2. Collector 3. Base

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:

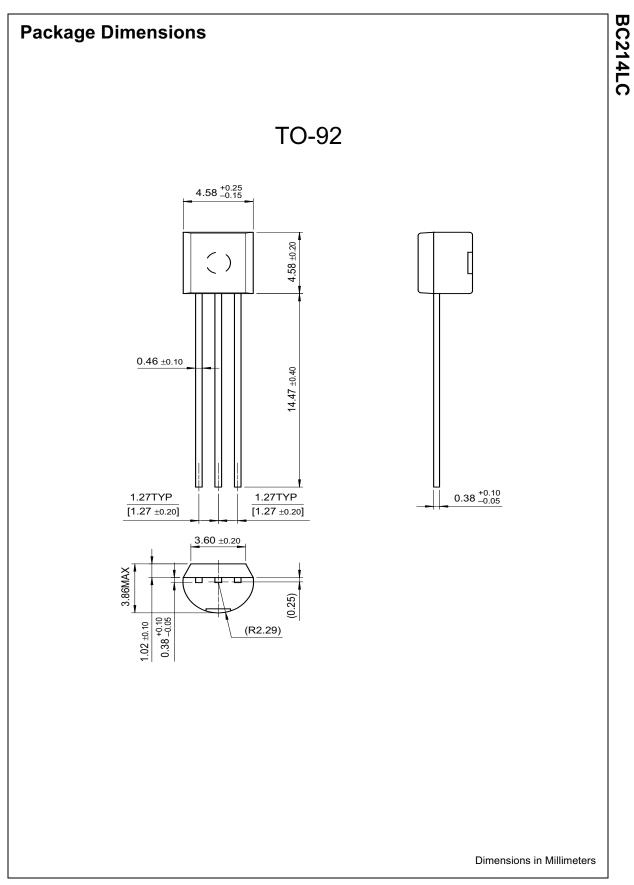
1) These ratings are based on a maximum junction temperature of 150 degrees C.
2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations

Electrical Characteristics Ta=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
Off Characte	eristics	.		•	
V _{(BR)CEO}	Collector-Emitter Voltage	$I_{\rm C} = -2mA, I_{\rm B} = 0$	-30		V
V _{(BR)CBO}	Collector-Base Voltage	$I_{\rm C} = -10\mu A, I_{\rm E} = 0$	-45		V
V _{(BR)EBO}	Emitter-Base Voltage	$I_{\rm E} = -10\mu A, I_{\rm C} = 0$	-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 Characte	eristics *				
h _{FE}	DC Current Gain	$V_{CE} = -5V, I_{C} = -2mA$	140	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	$I_{\rm C}$ = -100mA, $I_{\rm B}$ = -5mA		-1.1	V
V _{BE} (on)	Base-Emitter On Voltage	V _{CE} = -5V, I _C = -2mA	-0.6	-0.72	V
Small Signa	I 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	350	600	
C _{OB}	Output Capacitance	V _{CB} = -10V, f = 1MHz		10	pF

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

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



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