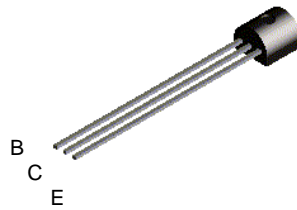


# BC212L



TO-92

## PNP General Purpose Amplifier

This device is designed for general purpose amplifier applications at collector currents to 300mA.  
Sourced from Process 68.

### Absolute Maximum Ratings\*

T<sub>A</sub> = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>CEO</sub>	Collector-Emitter Voltage	50	V
V <sub>CB0</sub>	Collector-Base Voltage	60	V
V <sub>EBO</sub>	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current - Continuous	300	mA
T <sub>J, Tstg</sub>	Operating and Storage Junction Temperature Range	-55 to +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°C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

### Thermal Characteristics

T<sub>A</sub> = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
P <sub>D</sub>	Total Device Dissipation Derate above 25°C	625 5.0	mW mW/°C
R <sub>θJC</sub>	Thermal Resistance, Junction to Case	83.3	°C/W
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient	200	°C/W

**PNP General Purpose Amplifier**

(continued)

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

Symbol	Parameter	Test Conditions	Min	Max	Units
<b>OFF CHARACTERISTICS</b>					
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 2 \text{ mA}$	50		V
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = 10 \text{ } \mu\text{A}$	60		V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = 10 \text{ } \mu\text{A}$	5		V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = 30\text{V}$		15	nA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = 4\text{V}$		15	nA
<b>ON CHARACTERISTICS*</b>					
$h_{FE}$	DC Current Gain	$I_C = 10 \text{ } \mu\text{A}, V_{CE} = 5 \text{ V}$ $I_C = 2 \text{ mA}, V_{CE} = 5 \text{ V}$	40 60	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 100 \text{ mA}, I_B = 5 \text{ mA}$		0.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 100 \text{ mA}, I_B = 5 \text{ mA}$		1.1	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = 2 \text{ mA}, V_{CE} = 5 \text{ V}$	0.6	0.72	V
<b>SMALL SIGNAL CHARACTERISTICS</b>					
$C_{ob}$	Output Capacitance	$V_{CB} = 10 \text{ V}, f = 1.0 \text{ MHz}$		10	pF
$h_{fe}$	Small Signal Current Gain	$I_C = 2 \text{ mA}, V_{CE} = 5 \text{ V}, f = 1\text{kHz}$	60		-
NF	Noise Figure	$I_C = 200 \text{ } \mu\text{A}, V_{CE} = 5 \text{ V}, f = 1\text{kHz},$ $R_g = 2\text{K}\Omega, BW = 200\text{Hz}$		10	dB
fT	Current Gain-Bandwidth Product	$V_{CE} = 5\text{V}, I_C = 10\text{mA}, f = 100\text{MHz}$	200		MHz

\*Pulse Test: Pulse Width < 300 $\mu\text{s}$ , Duty Cycle < 2.0%

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DOME™	ISOPLANAR™	Quiet Series™	
E <sup>2</sup> CMOS™	MICROWIRE™	SILENT SWITCHER®	
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## PRODUCT STATUS DEFINITIONS

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