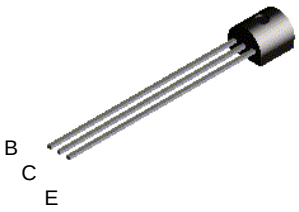
FAIRCHILD
SEMICONDUCTOR TM

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_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	50	V
V_{CBO}	Collector-Base Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current - Continuous	300	mA
$T_{J,\ Tstg}$	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_A = 25°C unless otherwise noted

Symbol	Characteristic	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

PNP General Purpose Amplifier
(continued)

Electrical Characteristics

T_A = 25°C unless otherwise noted

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

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

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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