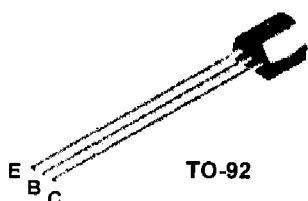


**BC548
 BC548A
 BC548B
 BC548C**



NPN General Purpose Amplifier

This device is designed for use as general purpose amplifiers and switches requiring collector currents to 300 mA. Sourced from Process 10. See PN100A for characteristics.

Absolute Maximum Ratings*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V _{CEO}	Collector-Emitter Voltage	30	V
V _{CES}	Collector-Base Voltage	30	V
V _{EBO}	Emitter-Base Voltage	5.0	V
I _c	Collector Current - Continuous	500	mA
T _J , T _{stg}	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.

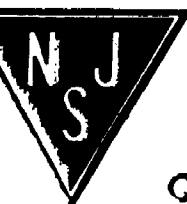
NOTES:

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

Thermal Characteristics

TA = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		BC548 / A / B / C	
P _D	Total Device Dissipation Derate above 25°C	625	mW
		5.0	mW/°C
R _{θJC}	Thermal Resistance, Junction to Case	83.3	°C/W
R _{θJA}	Thermal Resistance, Junction to Ambient	200	°C/W



NJ Semi-Conductors reserves the right to change test conditions, parameters limits and package dimensions without notice information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

NPN General Purpose Amplifier

(continued)

Electrical Characteristics

T_A = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
OFF CHARACTERISTICS					
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10 mA, I _B = 0	30		V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 10 μA, I _E = 0	30		V
V _{(BR)CES}	Collector-Base Breakdown Voltage	I _C = 10 μA, I _E = 0	30		V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 10 μA, I _C = 0	5.0		V
I _{CBO}	Collector Cutoff Current	V _{CB} = 30 V, I _E = 0 V _{CB} = 30 V, I _E = 0, T _A = +150 °C		15 5.0	nA μA

ON CHARACTERISTICS

h _{FE}	DC Current Gain	V _{CE} = 5.0 V, I _C = 2.0 mA	548 548A 548B 548C	110 110 200 420	800 220 450 800	
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 10 mA, I _B = 0.5 mA I _C = 100 mA, I _B = 5.0 mA			0.25 0.60	V V
V _{BE(on)}	Base-Emitter On Voltage	V _{CE} = 5.0 V, I _C = 2.0 mA V _{CE} = 5.0 V, I _C = 10 mA		0.58	0.70 0.77	V V

SMALL SIGNAL CHARACTERISTICS

h _{re}	Small-Signal Current Gain	I _C = 2.0 mA, V _{CE} = 5.0 V, f = 1.0 kHz	125	900	
NF	Noise Figure	V _{CE} = 5.0 V, I _C = 200 μA, R _S = 2.0 kΩ, f = 1.0 kHz, B _W = 200 Hz		10	dB