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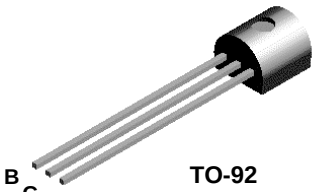
SEMICONDUCTOR TM

BC369



TO-92

PNP General Purpose Amplifier

This device is designed for general purpose medium power amplifiers and switches requiring collector currents to 1.2 A. Sourced from Process 77.

Absolute Maximum Ratings*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	20	V
V_{CES}	Collector-Base Voltage	25	V
V_{EBO}	Emitter-Base Voltage	5.0	V
I_C	Collector Current - Continuous	1.5	A
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.
3) All voltages (V) and currents (A) are negative polarity for PNP transistors.

Thermal Characteristics

TA = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		BC369	
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)

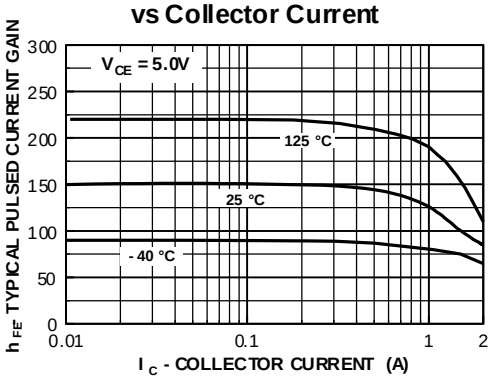
Electrical Characteristics
TA = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
OFF CHARACTERISTICS					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C = 10 mA, I_B = 0	20		V
$V_{(BR)CES}$	Collector-Base Breakdown Voltage	I_C = 100 µA, I_E = 0	25		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} = 25 V, I_E = 0 V_{CB} = 25 V, I_E = 0, T_A = 150°C		10 1.0	µA mA
I_{EBO}	Emitter-Cutoff Current	V_{EB} = 5.0 V, I_C = 0		10	µA
ON CHARACTERISTICS					
h_{FE}	DC Current Gain	I_C = 5.0 mA, V_{CE} = 10 V I_C = 0.5 A, V_{CE} = 1.0 V I_C = 1.0 A, V_{CE} = 1.0 V	50 85 60	 375 	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C = 1.0 A, I_B = 100 mA		0.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C = 1.0 A, V_{CE} = 1.0 V		1.0	V
SMALL SIGNAL CHARACTERISTICS					
f_T	Current Gain - Bandwidth Product	I_C = 10 mA, V_{CE} = 5.0 V, f = 35 MHz	45		MHz

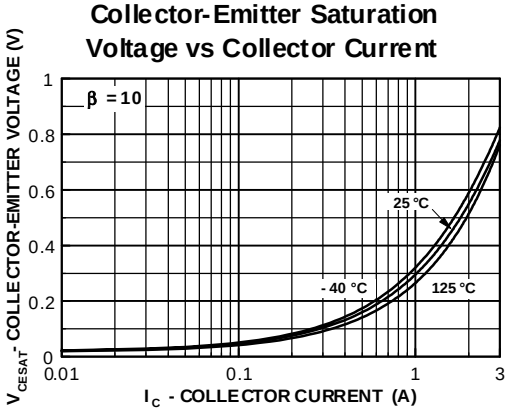
NOTE: All voltages (V) and currents (A) are negative polarity for PNP transistors.

Typical Characteristics

Typical Pulsed Current Gain vs Collector Current

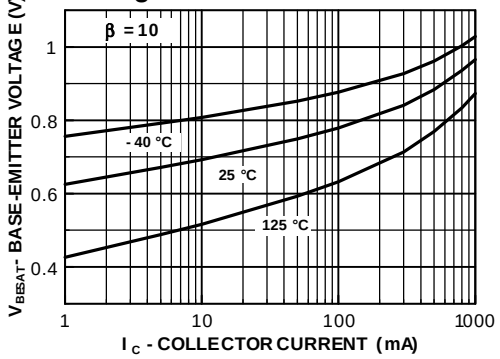


Collector-Emitter Saturation Voltage vs Collector Current

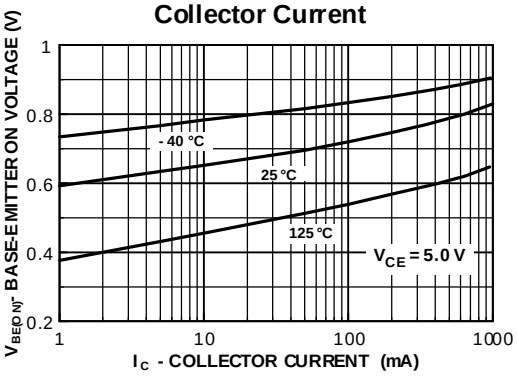


Typical Characteristics (continued)

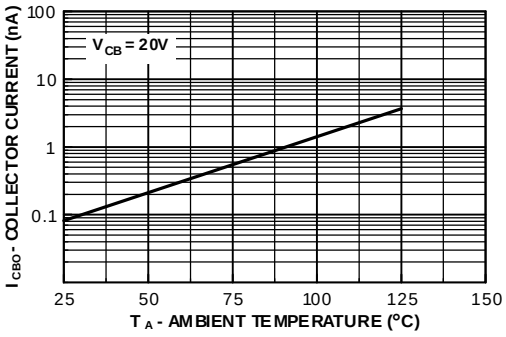
Base-Emitter Saturation Voltage vs Collector Current



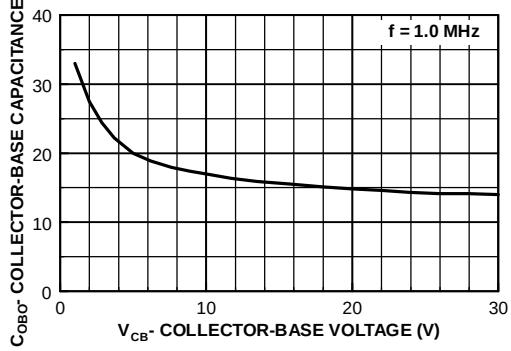
Base-Emitter ON Voltage vs Collector Current



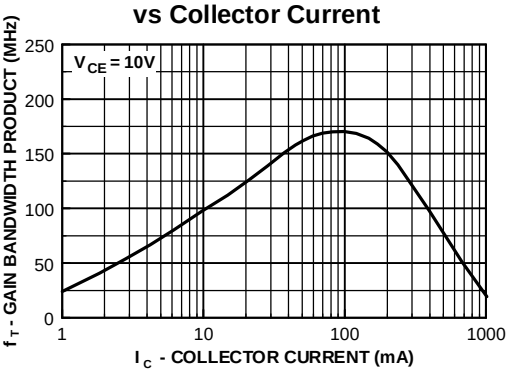
Collector-Cutoff Current vs Ambient Temperature



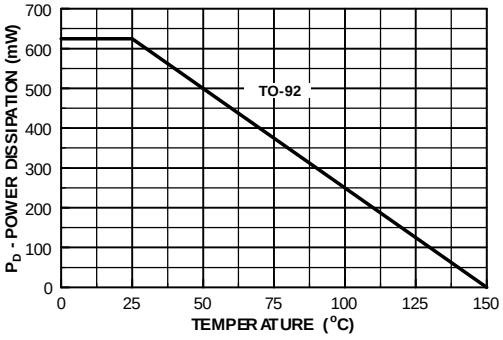
Collector-Base Capacitance vs Collector-Base Voltage



Gain Bandwidth Product vs Collector Current



Power Dissipation vs Ambient Temperature



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