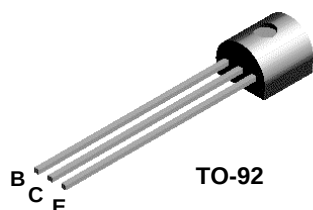


BC368



NPN General Purpose Amplifier

This device is designed for general purpose medium power amplifiers and switches requiring collector currents to 1.5 A.
Sourced from Process 37.

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	2.0	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

Thermal Characteristics

TA = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		BC368	
P _D	Total Device Dissipation Derate above 25°C	625 5.0	mW mW/°C
R _{θJC}	Thermal Resistance, Junction to Case	83.3	°C/W
R _{θJA}	Thermal Resistance, Junction to Ambient	200	°C/W

NPN General Purpose Amplifier
(continued)

Electrical Characteristics TA = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
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OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 10\text{ mA}, I_B = 0$	20		V
$V_{(BR)CES}$	Collector-Base Breakdown Voltage	$I_C = 100\text{ }\mu\text{A}, I_E = 0$	25		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 10\text{ }\mu\text{A}, I_C = 0$	5.0		V
I_{CBO}	Collector-Cutoff Current	$V_{CB} = 25\text{ V}, I_E = 0$ $V_{CB} = 25\text{ V}, I_E = 0, T_A = 150^\circ\text{C}$		10 1.0	μA mA
I_{EBO}	Emitter-Cutoff Current	$V_{EB} = 5.0\text{ V}, I_C = 0$		10	μA

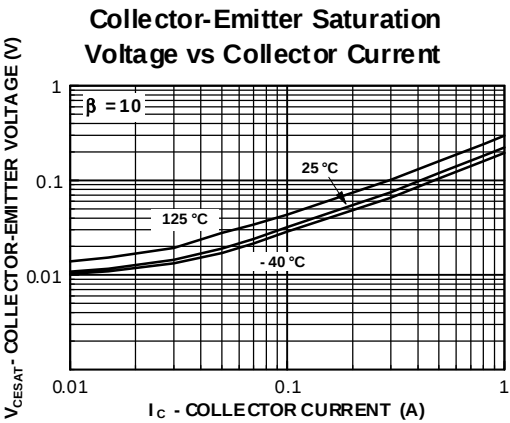
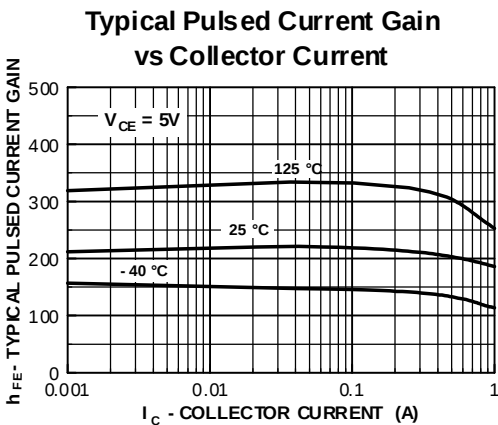
ON CHARACTERISTICS

h_{FE}	DC Current Gain	$I_C = 5.0\text{ mA}, V_{CE} = 10\text{ V}$ $I_C = 0.5\text{ A}, V_{CE} = 1.0\text{ V}$ $I_C = 1.0\text{ A}, V_{CE} = 1.0\text{ V}$	50 85 60	375	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 1.0\text{ A}, I_B = 100\text{ mA}$		0.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = 1.0\text{ A}, V_{CE} = 1.0\text{ V}$		1.0	V

SMALL SIGNAL CHARACTERISTICS

f_T	Current Gain - Bandwidth Product	$I_C = 10\text{ mA}, V_{CE} = 5.0\text{ V},$ $f = 35\text{ MHz}$	45		MHz
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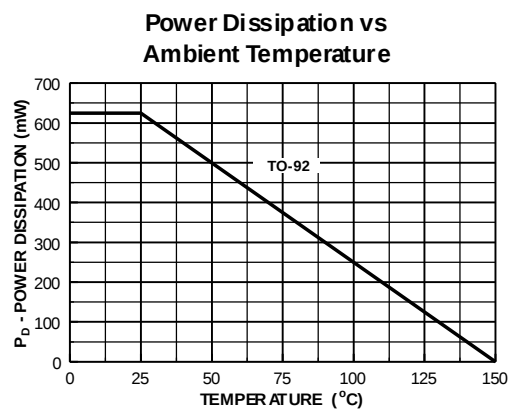
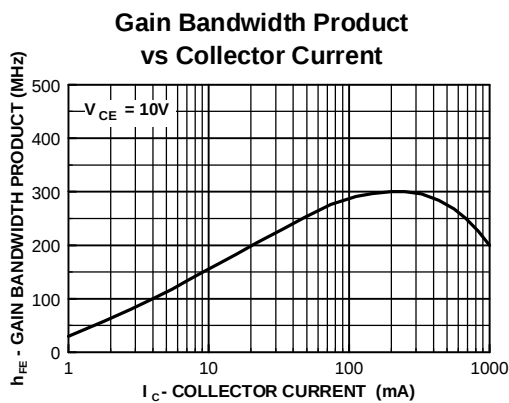
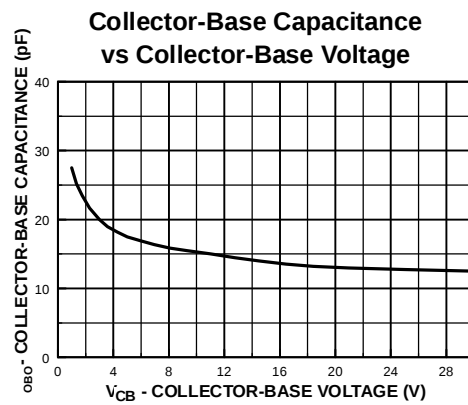
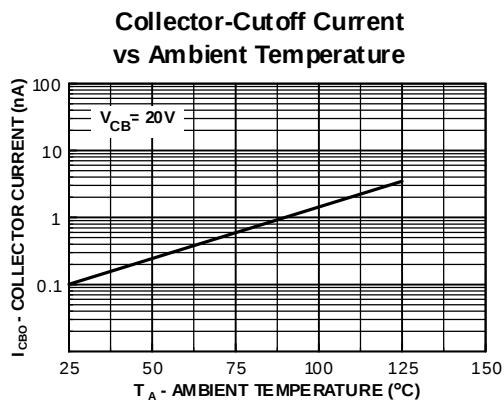
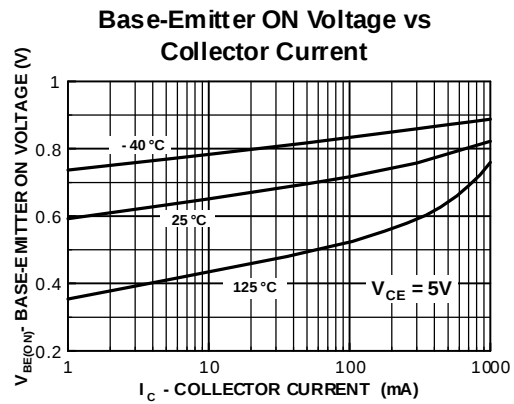
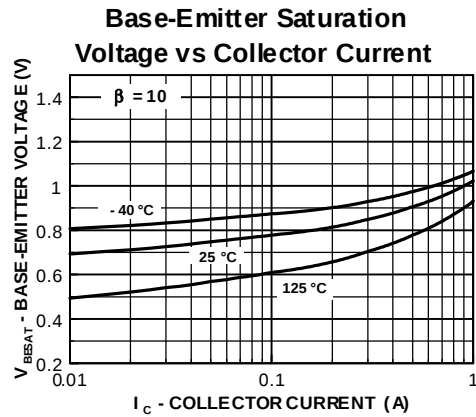
Typical Characteristics



NPN General Purpose Amplifier (continued)

BC368

Typical Characteristics (continued)



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Definition of Terms

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