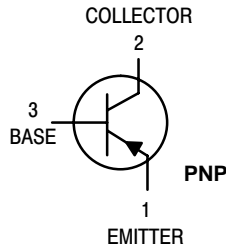
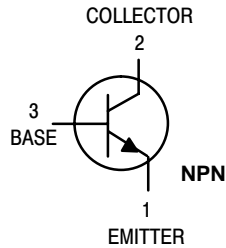
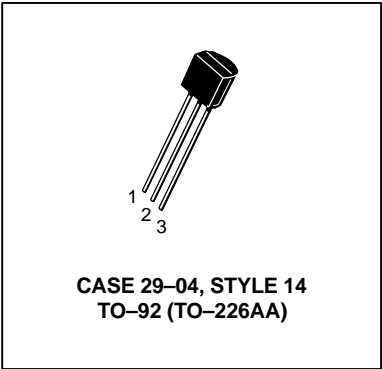


Amplifier Transistors



**BC368
NPN,
BC369
PNP**

Voltage and current are negative for PNP transistors



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector–Emitter Voltage	V_{CE0}	20	Vdc
Collector–Emitter Voltage	V_{CES}	25	Vdc
Emitter–Base Voltage	V_{EBO}	5.0	Vdc
Collector Current — Continuous	I_C	1.0	Adc
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	625 5.0	mW mW/°C
Total Device Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	1.5 12	Watt mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-55 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	200	°C/W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	83.3	°C/W

BC368 NPN, BC369 PNP

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
Collector–Emitter Breakdown Voltage ($I_C = 10\text{ mA}$, $I_B = 0$)	$V_{(BR)CEO}$	20	—	—	Vdc
Collector–Base Breakdown Voltage ($I_C = 100\ \mu\text{A}$, $I_E = 0$)	$V_{(BR)CBO}$	25	—	—	Vdc
Emitter–Base Breakdown Voltage ($I_E = 100\ \mu\text{A}$, $I_C = 0$)	$V_{(BR)EBO}$	5.0	—	—	Vdc
Collector Cutoff Current ($V_{CB} = 25\text{ V}$, $I_E = 0$) ($V_{CB} = 25\text{ V}$, $I_E = 0$, $T_J = 150^\circ\text{C}$)	I_{CBO}	—	—	10 1.0	μA_{dc} mA_{dc}
Emitter Cutoff Current ($V_{EB} = 5.0\text{ V}$, $I_C = 0$)	I_{EBO}	—	—	10	μA_{dc}
ON CHARACTERISTICS					
DC Current Gain ($V_{CE} = 10\text{ V}$, $I_C = 5.0\text{ mA}$) ($V_{CE} = 1.0\text{ V}$, $I_C = 0.5\text{ A}$) ($V_{CE} = 1.0\text{ V}$, $I_C = 1.0\text{ A}$)	h_{FE} BC368, 369 BC368–25	50 85 170 60	— — — —	— 375 375 —	—
Bandwidth Product ($I_C = 10\text{ mA}$, $V_{CE} = 5.0\text{ V}$, $f = 20\text{ MHz}$)	f_T	65	—	—	MHz
Collector–Emitter Saturation Voltage ($I_C = 1.0\text{ A}$, $I_B = 100\text{ mA}$)	$V_{CE(sat)}$	—	—	0.5	V
Base–Emitter On Voltage ($I_C = 1.0\text{ A}$, $V_{CE} = 1.0\text{ V}$)	$V_{BE(on)}$	—	—	1.0	V

BC368 NPN, BC369 PNP

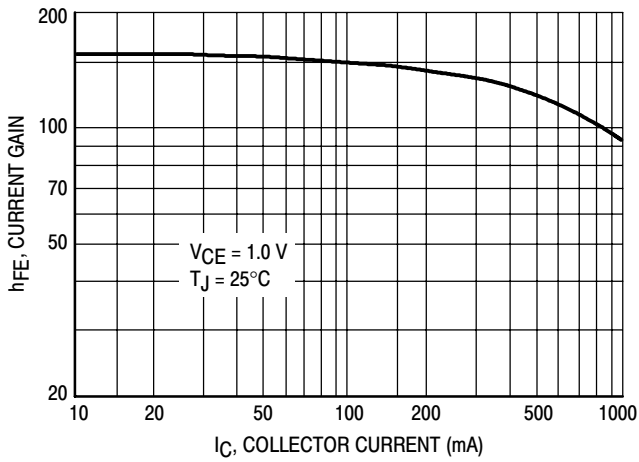


Figure 1. DC Current Gain

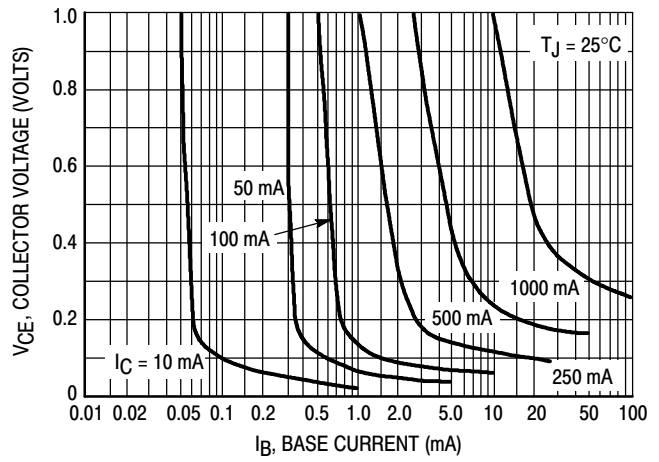


Figure 2. Collector Saturation Region

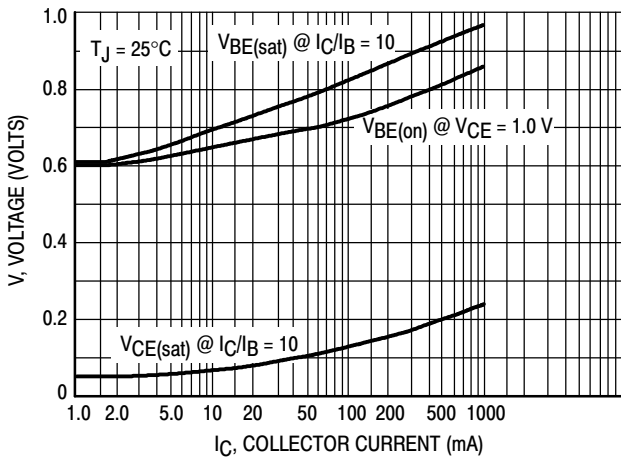


Figure 3. "On" Voltages

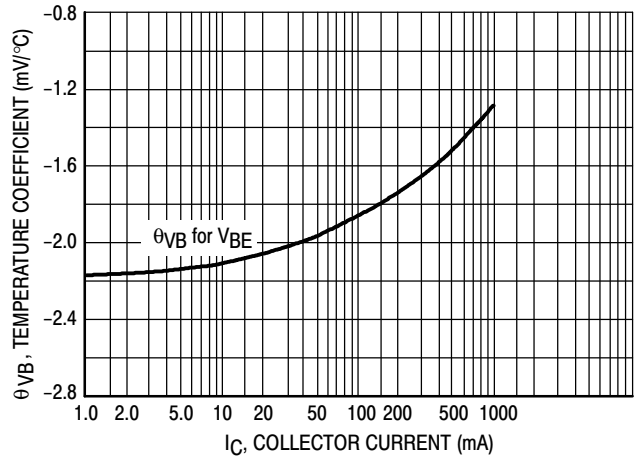


Figure 4. Temperature Coefficient

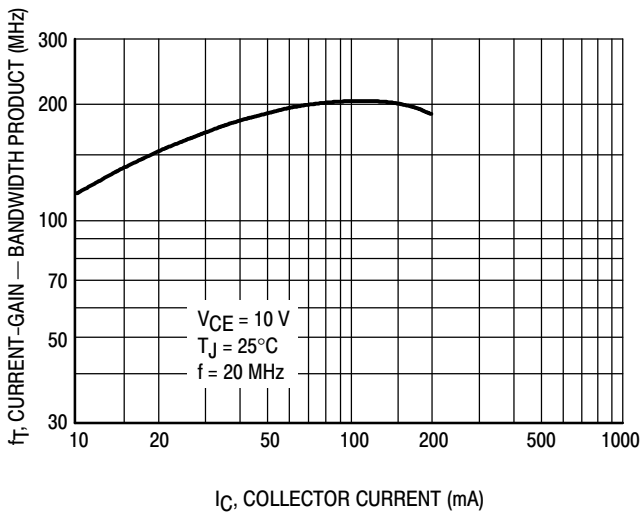


Figure 5. Current-Gain — Bandwidth Product

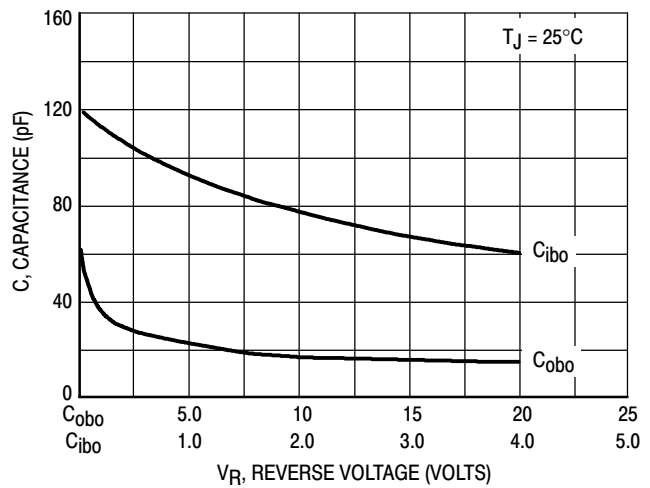
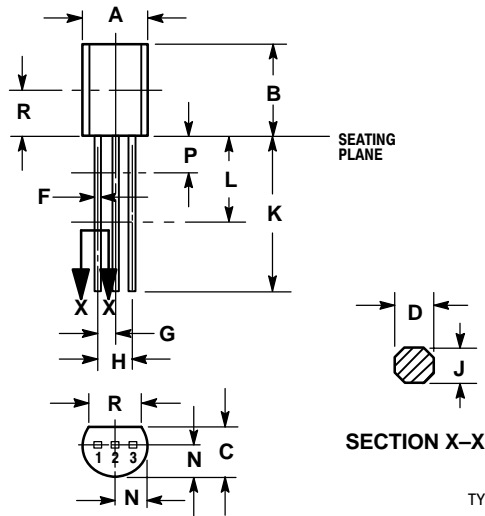


Figure 6. Capacitance

BC368 NPN, BC369 PNP

PACKAGE DIMENSIONS

CASE 029-04
(TO-226AA)
ISSUE AD




TYLE 14:
PIN 1. EMITTER
2. COLLECTOR
3. BASE

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. CONTOUR OF PACKAGE BEYOND DIMENSION R IS UNCONTROLLED.
4. DIMENSION F APPLIES BETWEEN P AND L. DIMENSIONS D AND J APPLY BETWEEN L AND K MINIMUM. LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.175	0.205	4.44	5.21
B	0.290	0.310	7.37	7.87
C	0.125	0.165	3.18	4.19
D	0.018	0.021	0.457	0.533
F	0.016	0.019	0.407	0.482
G	0.045	0.055	1.15	1.39
H	0.095	0.105	2.42	2.66
J	0.018	0.024	0.46	0.61
K	0.500	---	12.70	---
L	0.250	---	6.35	---
N	0.080	0.105	2.04	2.66
P	---	0.100	---	2.54
R	0.135	---	3.43	---

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