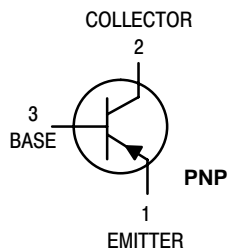
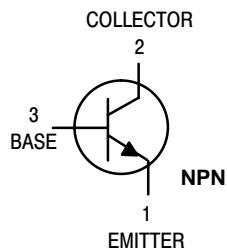


Amplifier Transistors



NPN BC368, -25 PNP BC369

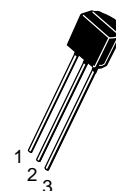
Voltage and current are negative
for PNP transistors

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/ $^\circ\text{C}$
Total Device Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	1.5 12	Watt mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-55 to $+150$	$^\circ\text{C}$

THERMAL CHARACTERISTICS

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



CASE 29–04, STYLE 14
TO–92 (TO–226AA)

NPN BC368, –25 PNP BC369

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Collector–Emitter Breakdown Voltage (I _C = 10 mA, I _B = 0)	V _{(BR)CEO}	20	—	—	Vdc
Collector–Base Breakdown Voltage (I _C = 100 µA, I _E = 0)	V _{(BR)CBO}	25	—	—	Vdc
Emitter–Base Breakdown Voltage (I _E = 100 µA, I _C = 0)	V _{(BR)EBO}	5.0	—	—	Vdc
Collector Cutoff Current (V _{CB} = 25 V, I _E = 0) (V _{CB} = 25 V, I _E = 0, T _J = 150°C)	I _{CBO}	— —	— —	10 1.0	µAdc mAdc
Emitter Cutoff Current (V _{EB} = 5.0 V, I _C = 0)	I _{EBO}	—	—	10	µAdc

ON CHARACTERISTICS

DC Current Gain (V _{CE} = 10 V, I _C = 5.0 mA) (V _{CE} = 1.0 V, I _C = 0.5 A) (V _{CE} = 1.0 V, I _C = 1.0 A)	h _{FE} BC368, 369 BC368–25	50 85 170 60	— — — —	— 375 375 —	—
Bandwidth Product (I _C = 10 mA, V _{CE} = 5.0 V, f = 20 MHz)	f _T	65	—	—	MHz
Collector–Emitter Saturation Voltage (I _C = 1.0 A, I _B = 100 mA)	V _{CE(sat)}	—	—	0.5	V
Base–Emitter On Voltage (I _C = 1.0 A, V _{CE} = 1.0 V)	V _{BE(on)}	—	—	1.0	V

NPN BC368, -25 PNP BC369

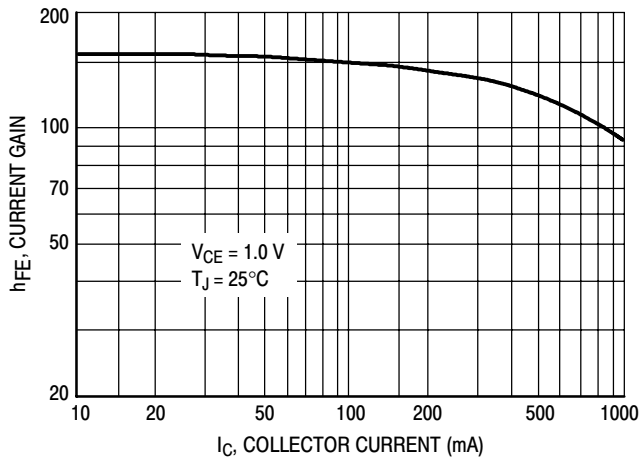


Figure 1. DC Current Gain

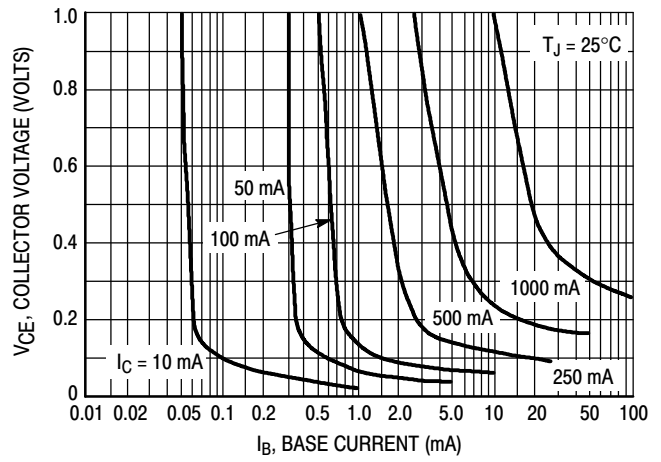


Figure 2. Collector Saturation Region

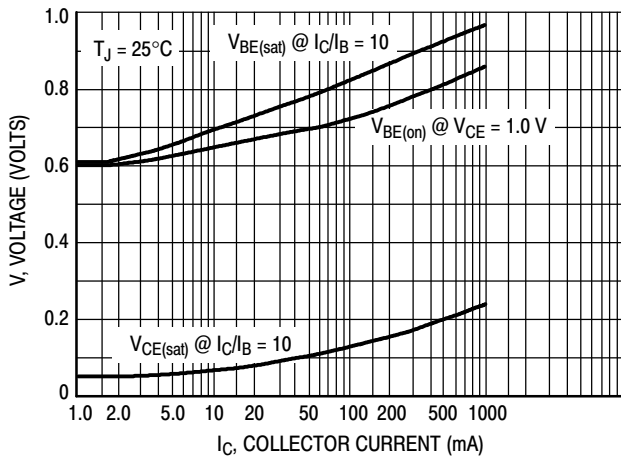


Figure 3. "On" Voltages

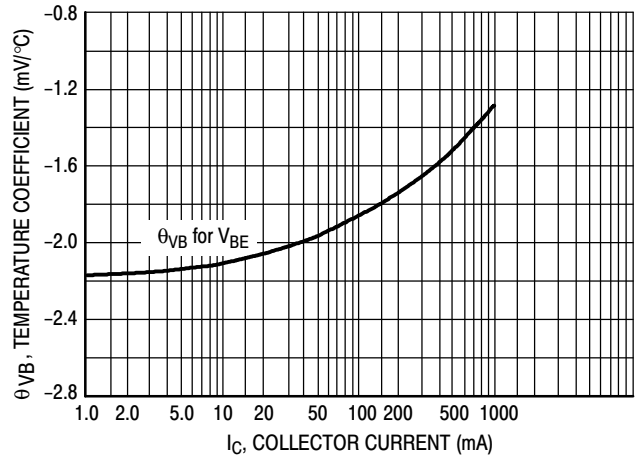


Figure 4. Temperature Coefficient

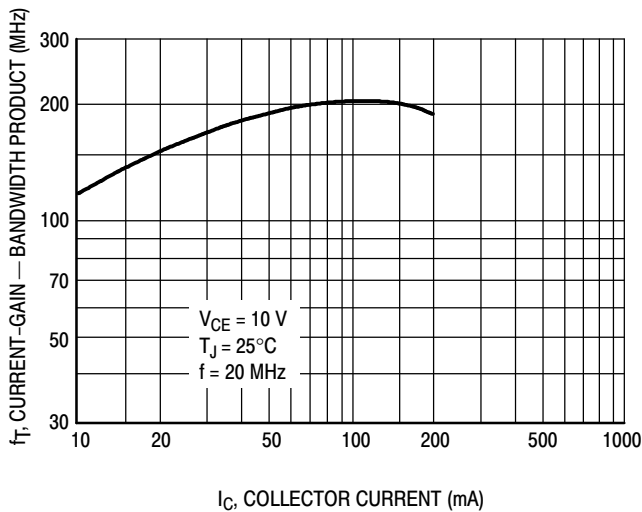


Figure 5. Current-Gain — Bandwidth Product

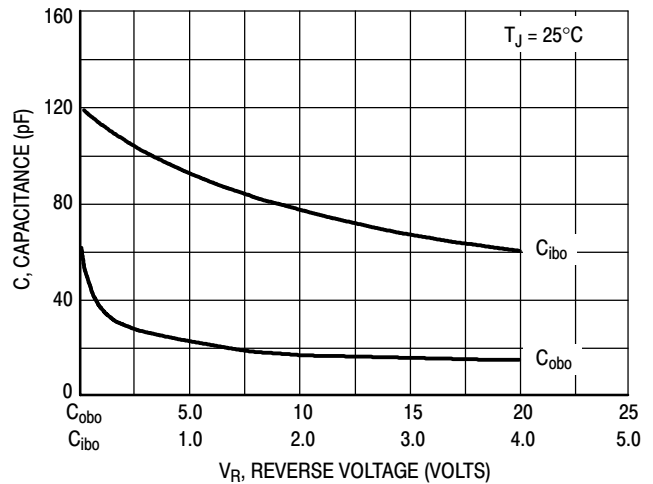
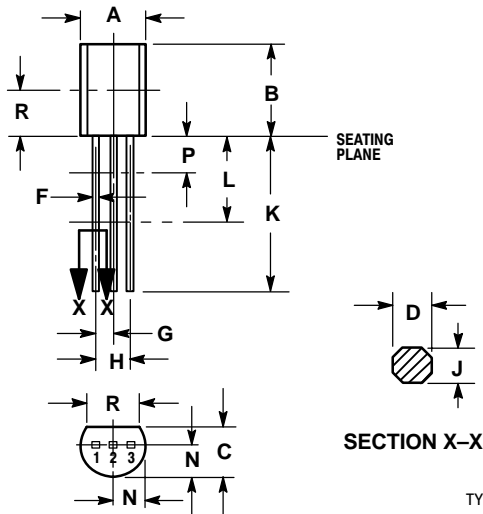


Figure 6. Capacitance

NPN BC368, -25 PNP BC369

PACKAGE DIMENSIONS

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




TYPE 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
E	0.016	0.019	0.407	0.482
F	0.045	0.055	1.15	1.39
G	0.095	0.105	2.42	2.66
H	0.018	0.024	0.46	0.61
I	0.500	---	12.70	---
J	0.250	---	6.35	---
K	0.080	0.105	2.04	2.66
L	---	0.100	---	2.54
M	0.135	---	3.43	---

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