



Micro Commercial Components

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BC556,B BC557,A,B,C BC558,B

PNP Silicon Amplifier Transistor 625mW

Features

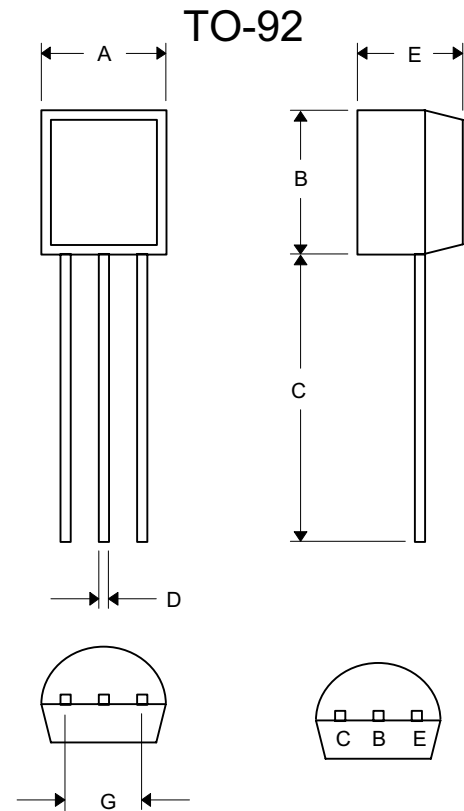
- Through Hole Package
- 150°C Junction Temperature
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Marking: Type Number

Mechanical Data

- Case: TO-92, Molded Plastic
- Polarity: indicated as above.

Maximum Ratings @ 25°C Unless Otherwise Specified

Charateristic	Symbol	Value	Unit
Collector-Emitter Voltage	BC556 BC557 BC558	V_{CEO} -65 -45 -30	V
Collector-Base Voltage	BC556 BC557 BC558	V_{CBO} -80 -50 -30	V
Emitter-Base Voltage	V_{EBO}	-5.0	V
Collector Current(DC)	I_C	-100	mA
Power Dissipation@ $T_A=25^\circ\text{C}$	P_d	625 5.0	mW mW/°C
Power Dissipation@ $T_C=25^\circ\text{C}$	P_d	1.5 12	W mW/°C
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	200	°C/W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	83.3	°C/W
Operating & Storage Temperature	T_j, T_{STG}	-55~150	°C



DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.170	.190	4.33	4.83	
B	.170	.190	4.30	4.83	
C	.550	.590	13.97	14.97	
D	.010	.020	0.36	0.56	
E	.130	.160	3.30	3.96	
G	.010	.104	2.44	2.64	

BC556 thru BC558B

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

Characteristic	Symbol	Min	Typ	Max	Unit	
OFF CHARACTERISTICS						
Collector–Emitter Breakdown Voltage (I _C = –2.0 mA, I _B = 0)	BC556 BC557 BC558	V _{(BR)CEO}	–65 –45 –30	— — —	— — —	V
Collector–Base Breakdown Voltage (I _C = –100 μA)	BC556 BC557 BC558	V _{(BR)CBO}	–80 –50 –30	— — —	— — —	V
Emitter–Base Breakdown Voltage (I _E = –100 μA, I _C = 0)	BC556 BC557 BC558	V _{(BR)EBO}	–5.0 –5.0 –5.0	— — —	— — —	V

ON CHARACTERISTICS

DC Current Gain (I _C = –10 μA, V _{CE} = –5.0 V)	BC557A BC556B/557B/558B BC557C	h _{FE}	— — —	90 150 270	— — —	—
(I _C = –2.0 mA, V _{CE} = –5.0 V)	BC556 BC557 BC558 BC557A BC556B/557B/558B BC557C		120 120 120 120 180 420	— — — 170 290 500	500 800 800 220 460 800	
(I _C = –100 mA, V _{CE} = –5.0 V)	BC557A BC556B/557B/558B BC557C		— — —	120 180 300	— — —	
Collector–Emitter Saturation Voltage (I _C = –100 mA, I _B = –5.0 mA)		V _{CE(sat)}	—	---	–0.3	V
Base–Emitter Saturation Voltage (I _C = –100 mA, I _B = –5.0 mA)		V _{BE(sat)}	—	—	–1.0	V
Base–Emitter On Voltage (I _C = –2.0 mA, V _{CE} = –5.0 Vdc) (I _C = –10 mA, V _{CE} = –5.0 Vdc)		V _{BE(on)}	–0.55 —	–0.62 –0.7	–0.7 –0.82	V

SMALL–SIGNAL CHARACTERISTICS

Current–Gain — Bandwidth Product (I _C = –10 mA, V _{CE} = –5.0 V, f = 100 MHz)	BC556 BC557 BC558	f _T	150 150 150	280 320 360	— — —	MHz
Output Capacitance (V _{CB} = –10 V, I _C = 0, f = 1.0 MHz)		C _{ob}	—	3.0	6.0	pF

BC557/BC558

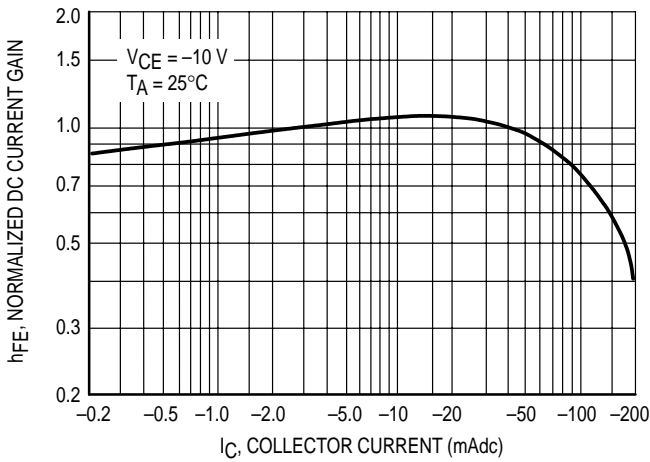


Figure 1. Normalized DC Current Gain

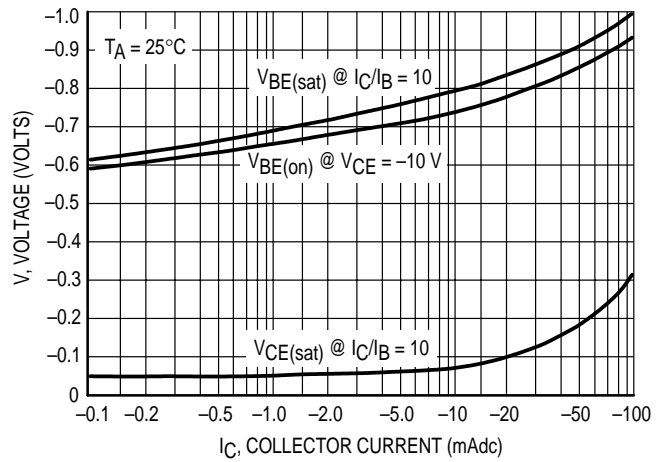


Figure 2. "Saturation" and "On" Voltages

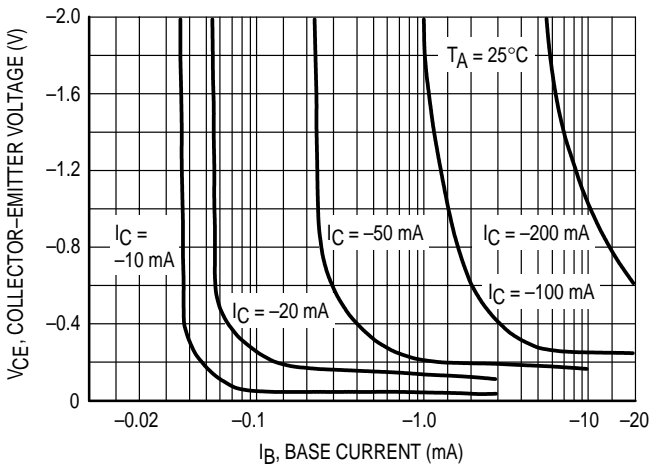


Figure 3. Collector Saturation Region

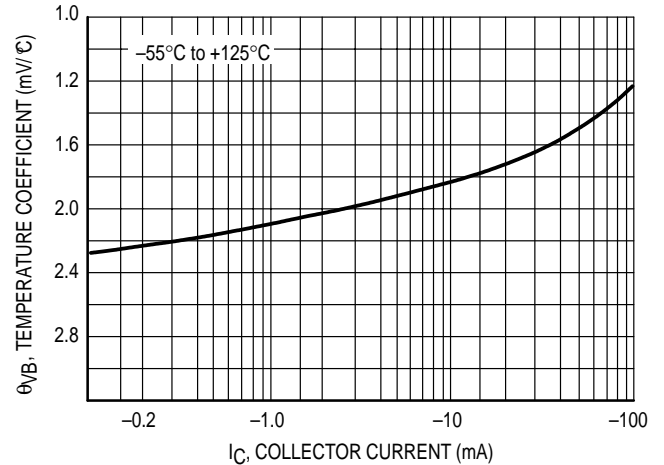


Figure 4. Base-Emitter Temperature Coefficient

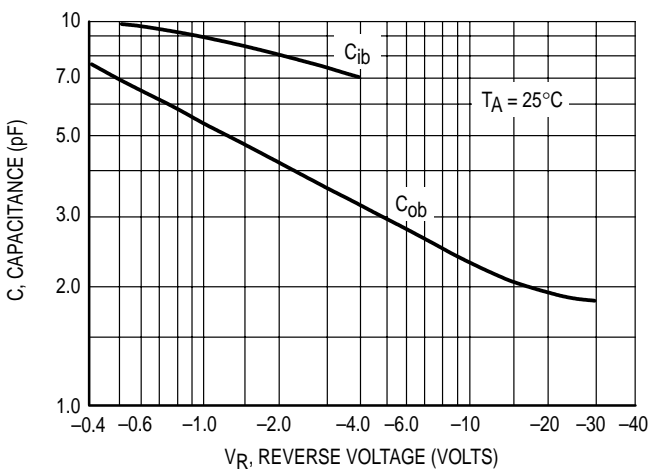


Figure 5. Capacitances

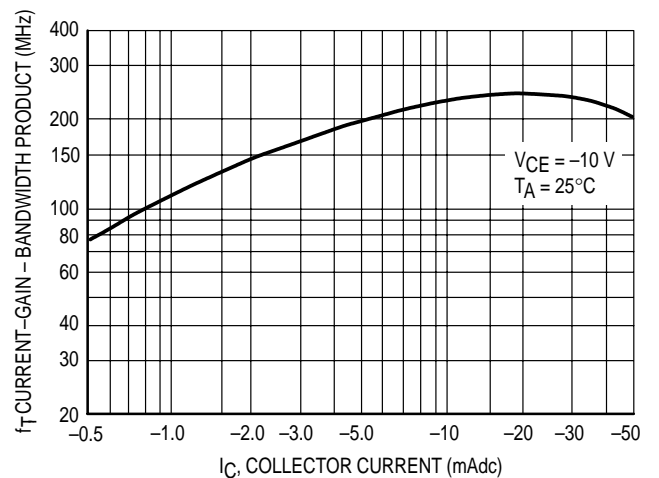


Figure 6. Current-Gain - Bandwidth Product

BC556 thru BC558B

BC556

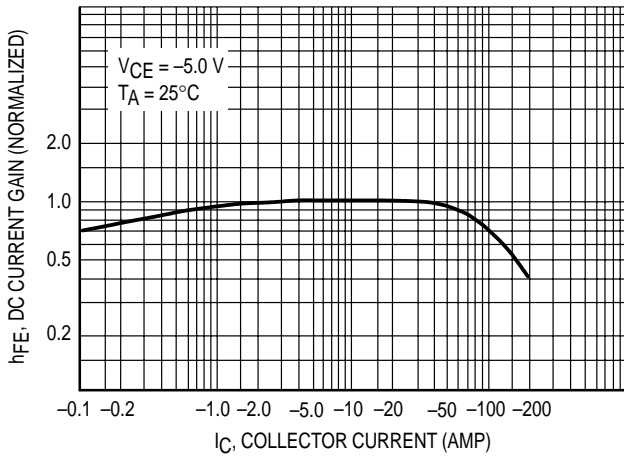


Figure 7. DC Current Gain

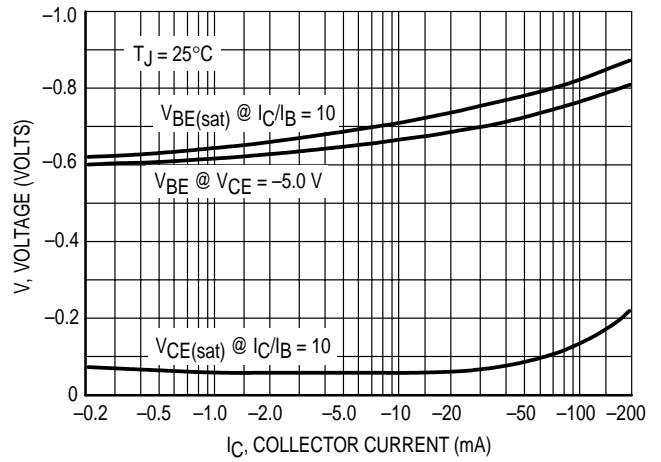


Figure 8. "On" Voltage

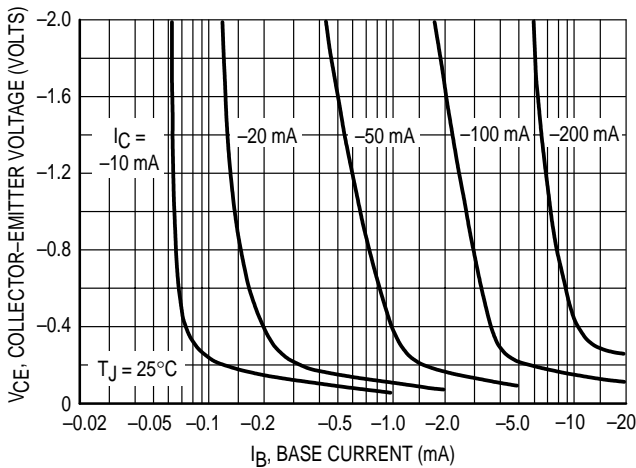


Figure 9. Collector Saturation Region

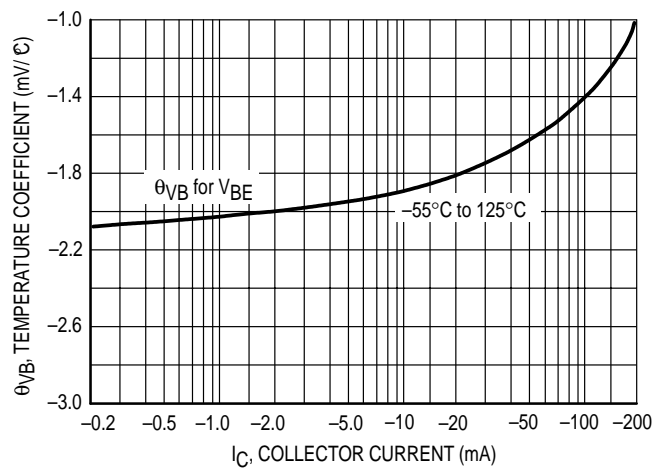


Figure 10. Base-Emitter Temperature Coefficient

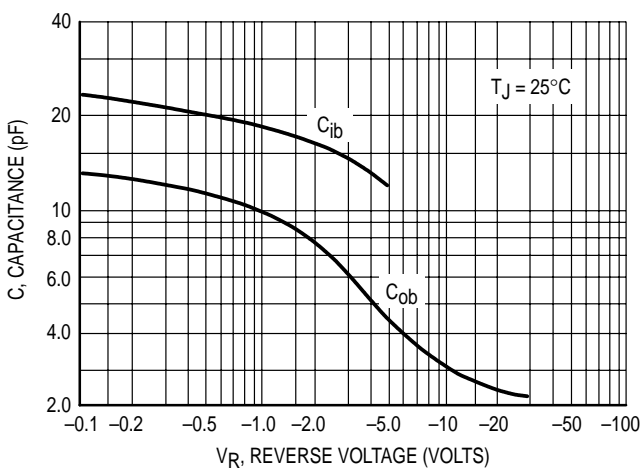


Figure 11. Capacitance

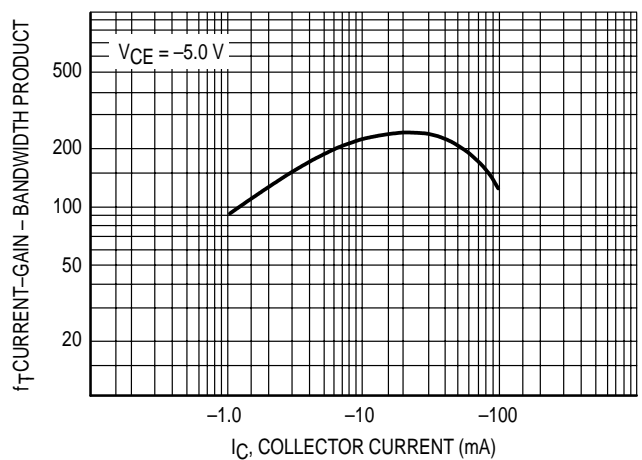


Figure 12. Current-Gain - Bandwidth Product



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