



Micro Commercial Components



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

PNP Silicon Amplifier Transistor 625mW

Features

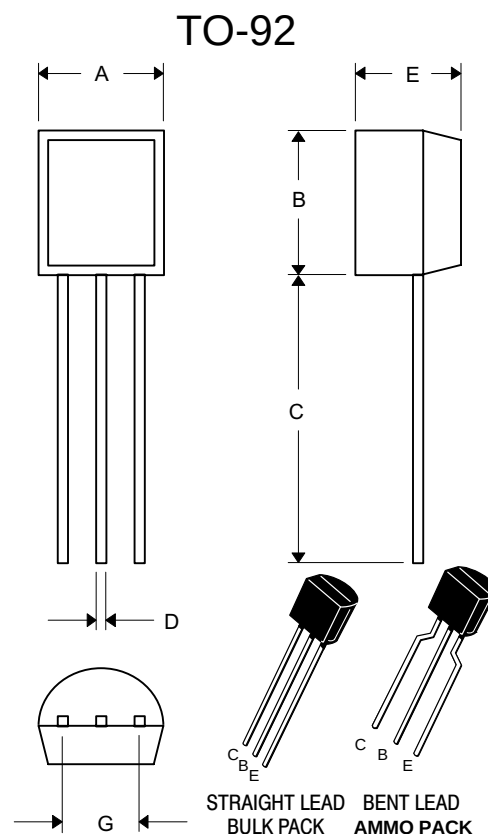
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- 150°C Junction Temperature
- Through Hole Package
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: Type Number
- Halogen free available upon request by adding suffix "-HF"

Mechanical Data

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

Maximum Ratings @ 25°C Unless Otherwise Specified

Charateristic	Symbol	Value	Unit
Collector-Emitter Voltage	BC556 BC557 BC558	-65 -45 -30	V
Collector-Base Voltage	BC556 BC557 BC558	-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



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.175	.185	4.45	4.70	
B	.175	.185	4.45	4.70	
C	.500	---	12.70	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	Straight Lead
	.173	.220	4.40	5.60	Bent Lead

* For ammo packing detailed specification, click here to visit our website of product packaging for details.

BC556 thru BC558B

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

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Collector Cut-off Current ($V_{CB} = -70\text{ V}$, $I_E = 0$)	I_{CBO}	—	—	-100	nA
Collector–Emitter Breakdown Voltage ($I_C = -2.0\text{ mAdc}$, $I_B = 0$)	$V_{(BR)CEO}$	-65 -45 -30	— — —	— — —	V
Collector–Base Breakdown Voltage ($I_C = -100\text{ }\mu\text{Adc}$)	$V_{(BR)CBO}$	-80 -50 -30	— — —	— — —	V
Emitter–Base Breakdown Voltage ($I_E = -100\text{ }\mu\text{Adc}$, $I_C = 0$)	$V_{(BR)EBO}$	-5.0 -5.0 -5.0	— — —	— — —	V

ON CHARACTERISTICS

DC Current Gain ($I_C = -10\text{ }\mu\text{Adc}$, $V_{CE} = -5.0\text{ V}$)	BC557A BC556B/557B/558B BC557C	h_{FE}	— — —	90 150 270	— — —	—
($I_C = -2.0\text{ mAdc}$, $V_{CE} = -5.0\text{ V}$)	BC556 BC557 BC558 BC557A BC556B/557B/558B BC557C		120 120 120 120 180 420	— — — 170 290 500	500 800 800 220 460 800	
($I_C = -100\text{ mAdc}$, $V_{CE} = -5.0\text{ V}$)	BC557A BC556B/557B/558B BC557C		— — —	120 180 300	— — —	
Collector–Emitter Saturation Voltage ($I_C = -100\text{ mAdc}$, $I_B = -5.0\text{ mAdc}$)		$V_{CE(sat)}$	—	---	-0.3	V
Base–Emitter Saturation Voltage ($I_C = -100\text{ mAdc}$, $I_B = -5.0\text{ mAdc}$)		$V_{BE(sat)}$	—	—	-1.0	V
Base–Emitter On Voltage ($I_C = -2.0\text{ mAdc}$, $V_{CE} = -5.0\text{ Vdc}$) ($I_C = -10\text{ mAdc}$, $V_{CE} = -5.0\text{ Vdc}$)		$V_{BE(on)}$	-0.55 —	-0.62 -0.7	-0.7 -0.82	V

SMALL–SIGNAL CHARACTERISTICS

Current–Gain — Bandwidth Product ($I_C = -10\text{ mA}$, $V_{CE} = -5.0\text{ V}$, $f = 100\text{ MHz}$)	BC556 BC557 BC558	f_T	150 150 150	280 320 360	— — —	MHz
Output Capacitance ($V_{CB} = -10\text{ V}$, $I_C = 0$, $f = 1.0\text{ MHz}$)		C_{ob}	—	3.0	6.0	pF

BC557/BC558

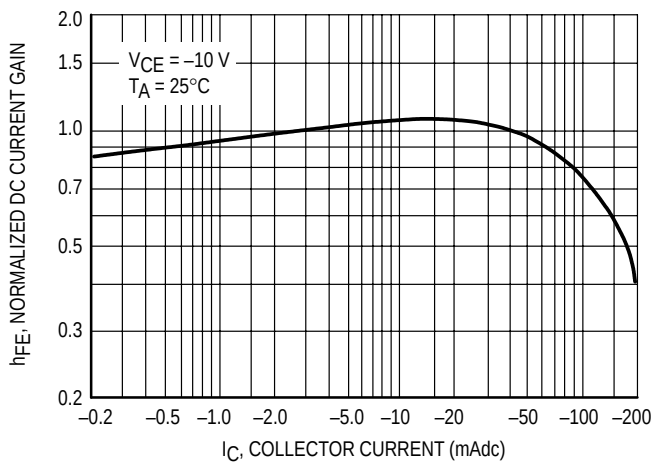


Figure 1. Normalized DC Current Gain

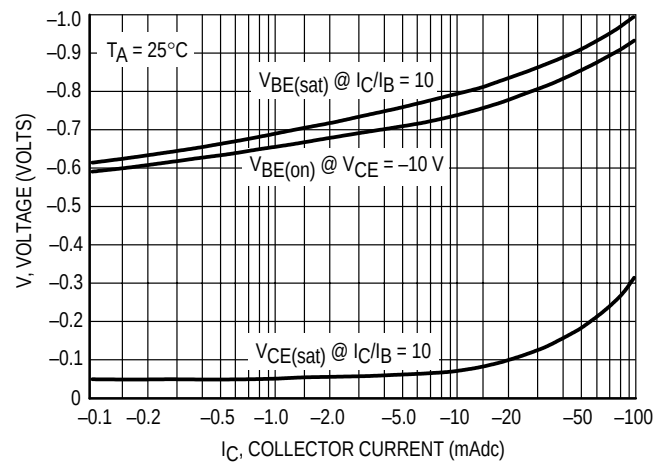


Figure 2. "Saturation" and "On" Voltages

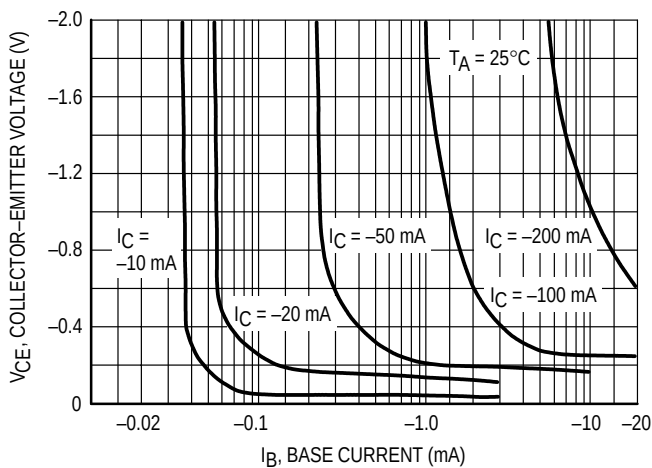


Figure 3. Collector Saturation Region

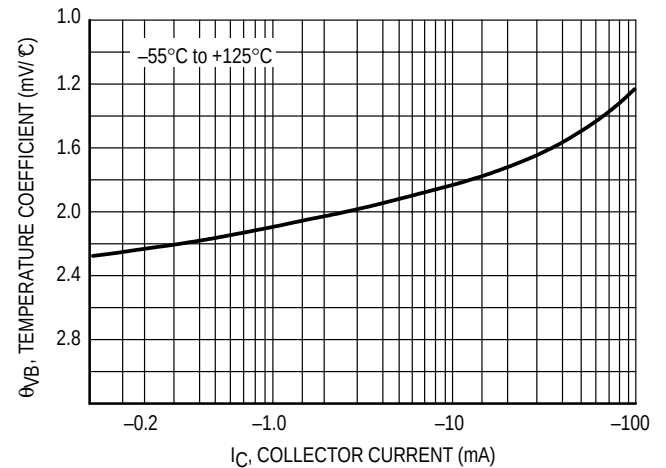


Figure 4. Base-Emitter Temperature Coefficient

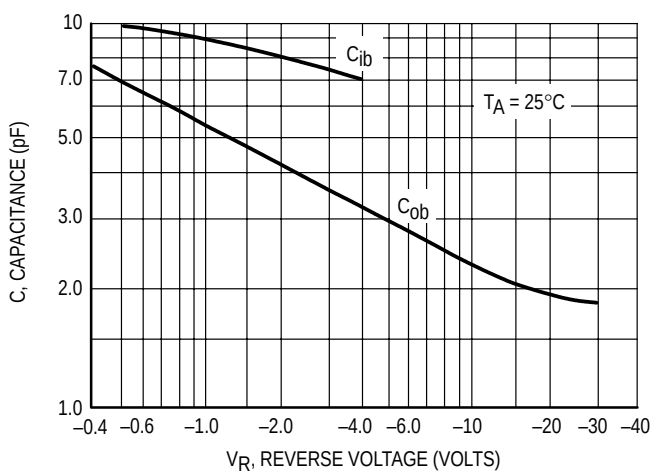


Figure 5. Capacitances

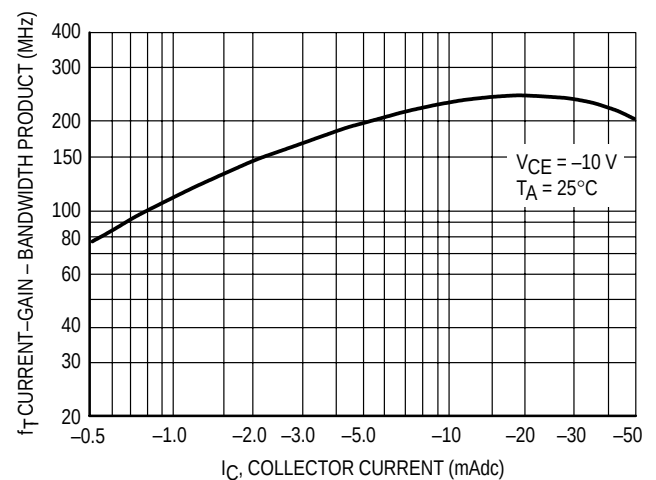


Figure 6. Current-Gain - Bandwidth Product

BC556

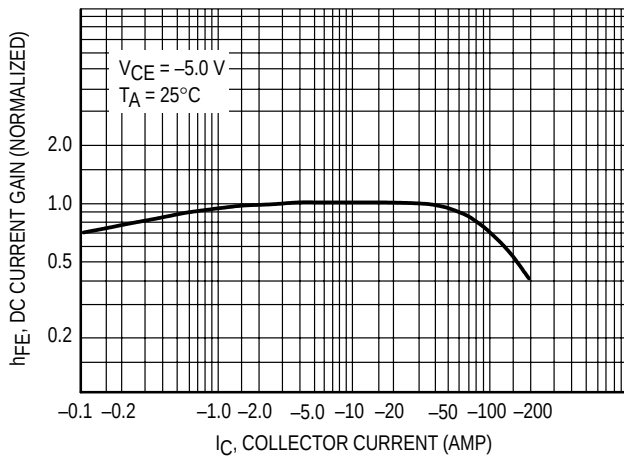


Figure 7. DC Current Gain

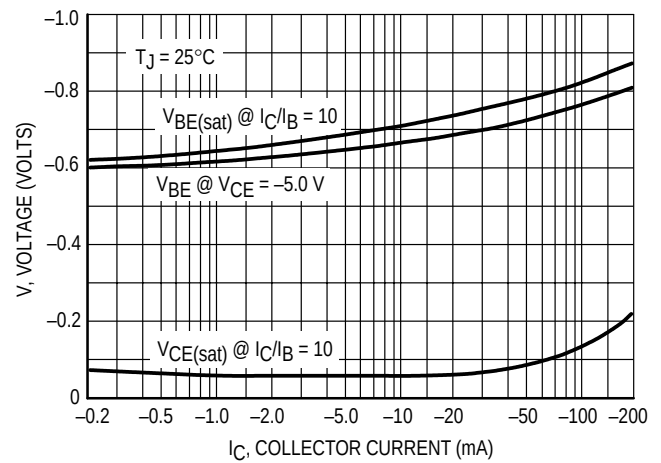


Figure 8. "On" Voltage

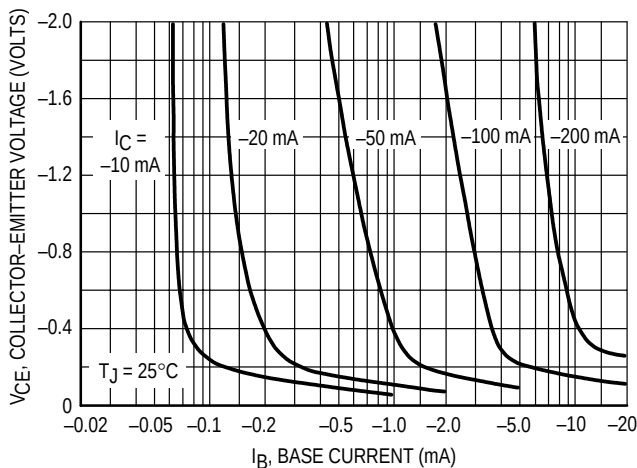


Figure 9. Collector Saturation Region

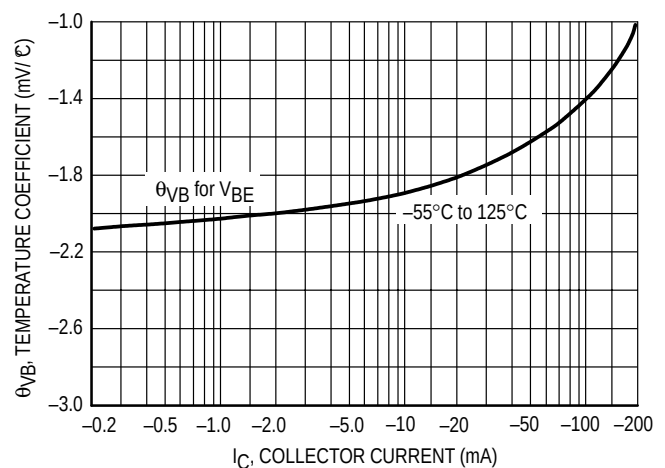


Figure 10. Base-Emitter Temperature Coefficient

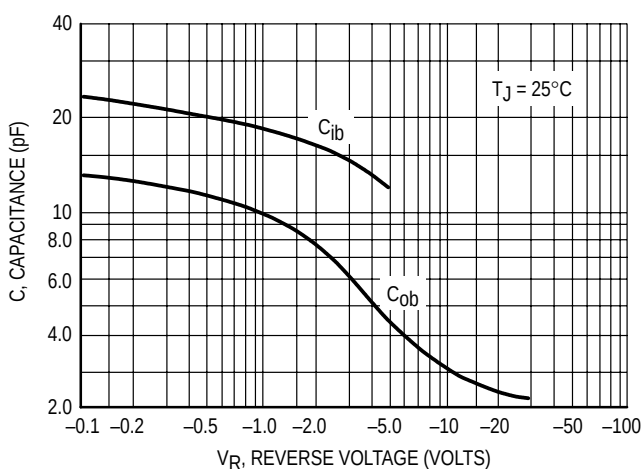


Figure 11. Capacitance

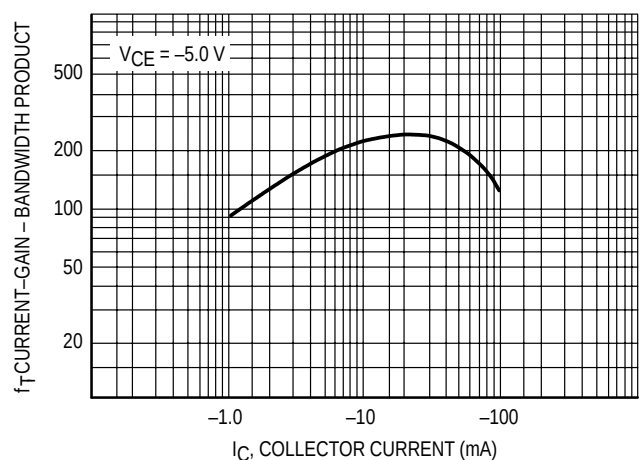


Figure 12. Current-Gain - Bandwidth Product

Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 20Kpcs/Carton
Part Number-BP	Bulk: 100Kpcs/Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-AP-HF

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