

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

**PNP Silicon  
 Amplifier Transistor  
 625mW**

**Features**

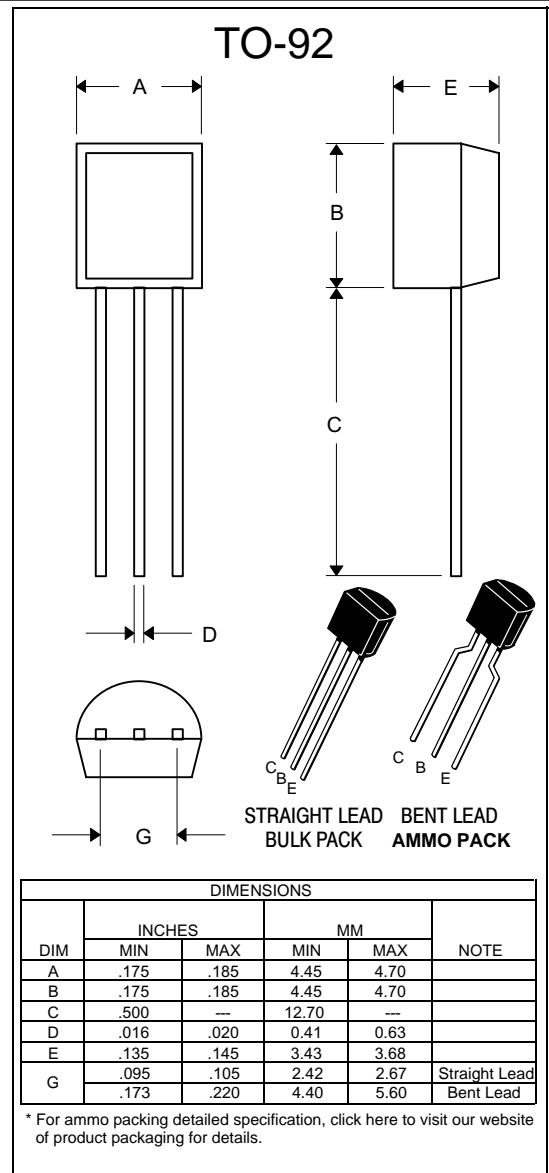
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- 150°C Junction Temperature
- Through Hole Package
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: Type Number
- Halogen free available upon request by adding suffix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



# BC556 thru BC558B

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
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### OFF CHARACTERISTICS

Collector Cut-off Current (V <sub>CB</sub> = -70 V, I <sub>E</sub> = 0)	I <sub>CBO</sub>	—	—	-100	nA
Collector–Emitter Breakdown Voltage (I <sub>C</sub> = -2.0 mA, I <sub>B</sub> = 0)	V <sub>(BR)CEO</sub>	-65 -45 -30	— — —	— — —	V
Collector–Base Breakdown Voltage (I <sub>C</sub> = -100 μA)	V <sub>(BR)CBO</sub>	-80 -50 -30	— — —	— — —	V
Emitter–Base Breakdown Voltage (I <sub>E</sub> = -100 μA, I <sub>C</sub> = 0)	V <sub>(BR)EBO</sub>	-5.0 -5.0 -5.0	— — —	— — —	V

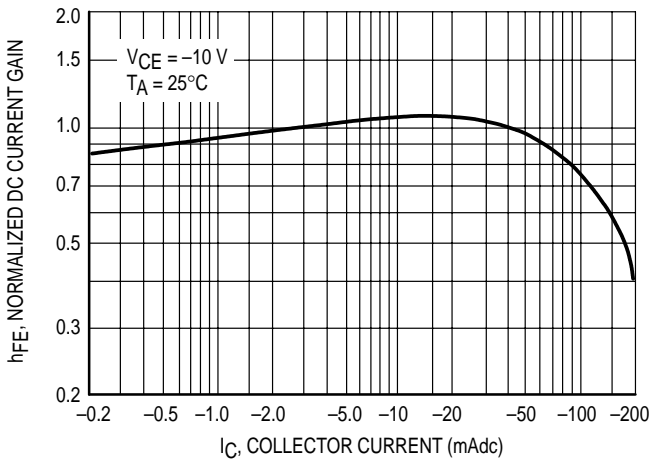
### ON CHARACTERISTICS

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

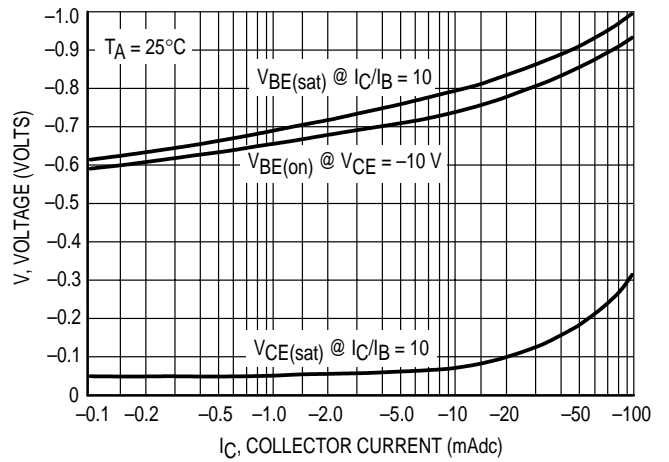
### SMALL-SIGNAL CHARACTERISTICS

Current–Gain — Bandwidth Product (I <sub>C</sub> = -10 mA, V <sub>CE</sub> = -5.0 V, f = 100 MHz)	f <sub>T</sub>	150	280	—	MHz
	BC556	150	320	—	—
	BC557	150	360	—	—
	BC558	150	—	—	—
Output Capacitance (V <sub>CB</sub> = -10 V, I <sub>C</sub> = 0, f = 1.0 MHz)	C <sub>ob</sub>	—	3.0	6.0	pF

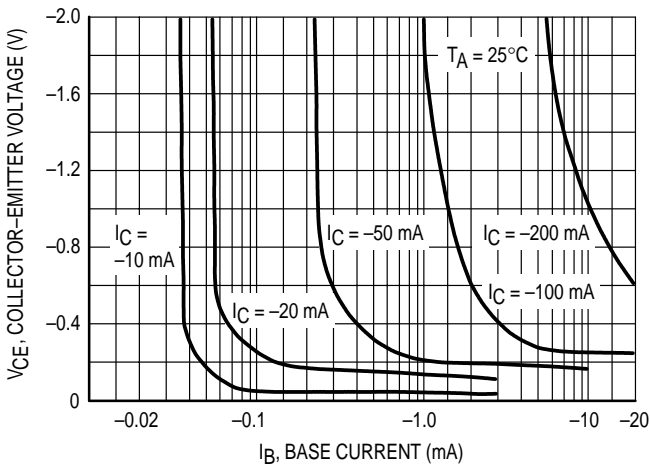
## BC557/BC558



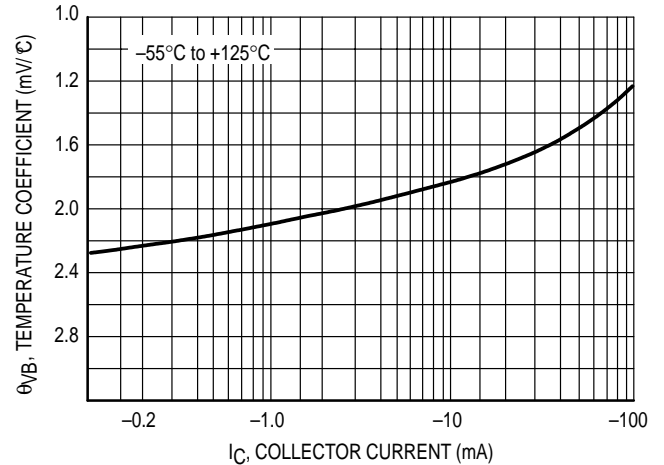
**Figure 1. Normalized DC Current Gain**



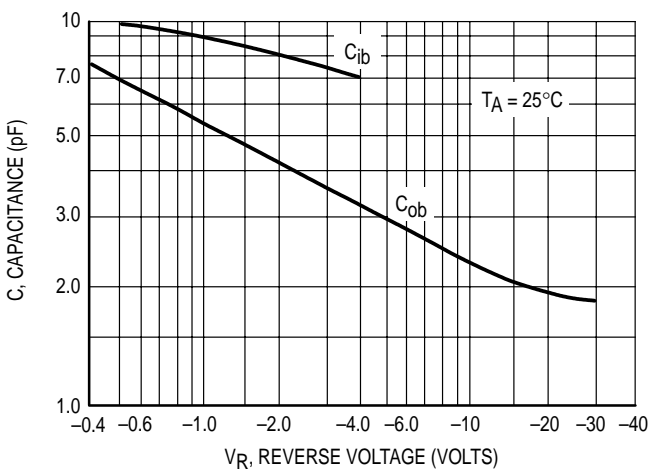
**Figure 2. "Saturation" and "On" Voltages**



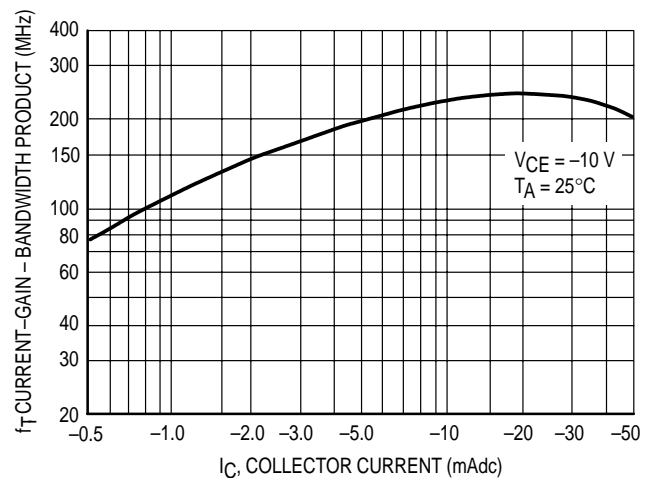
**Figure 3. Collector Saturation Region**



**Figure 4. Base-Emitter Temperature Coefficient**



**Figure 5. Capacitances**



**Figure 6. Current-Gain - Bandwidth Product**

# BC556 thru BC558B

## BC556

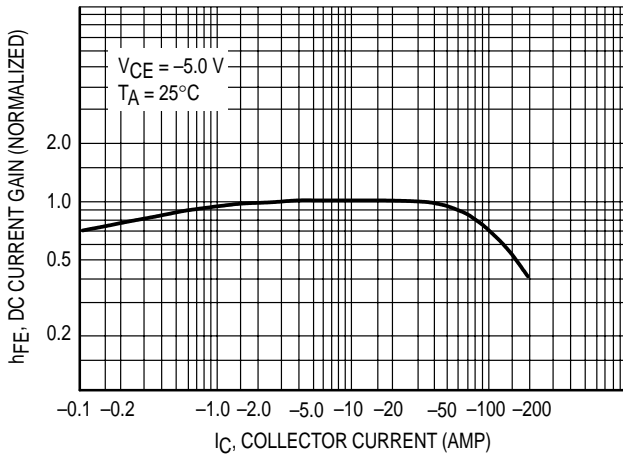


Figure 7. DC Current Gain

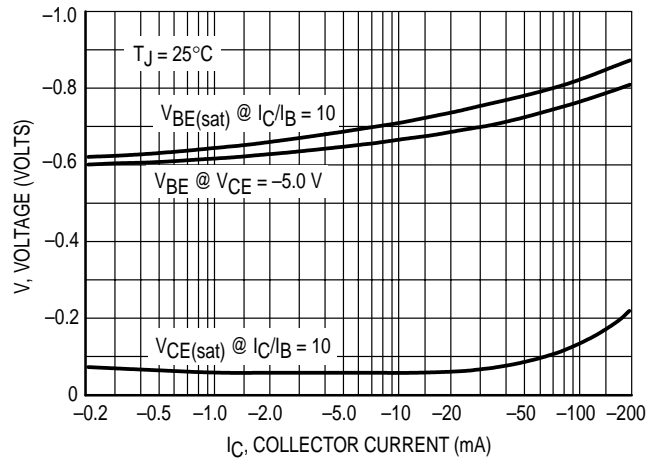


Figure 8. "On" Voltage

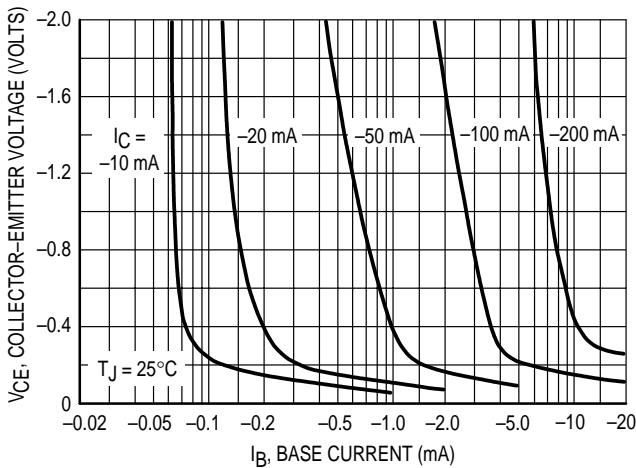


Figure 9. Collector Saturation Region

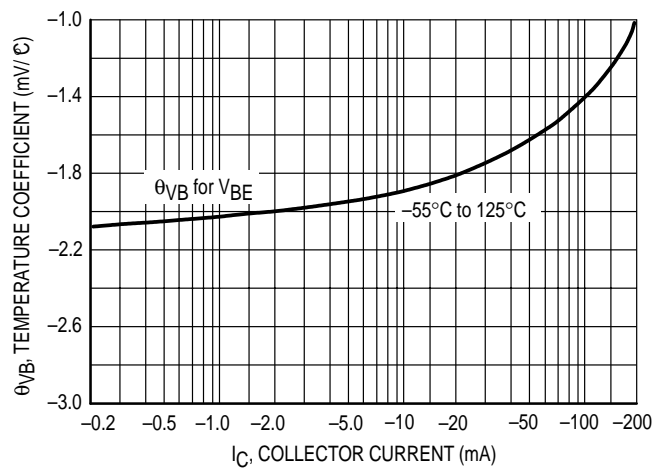


Figure 10. Base-Emitter Temperature Coefficient

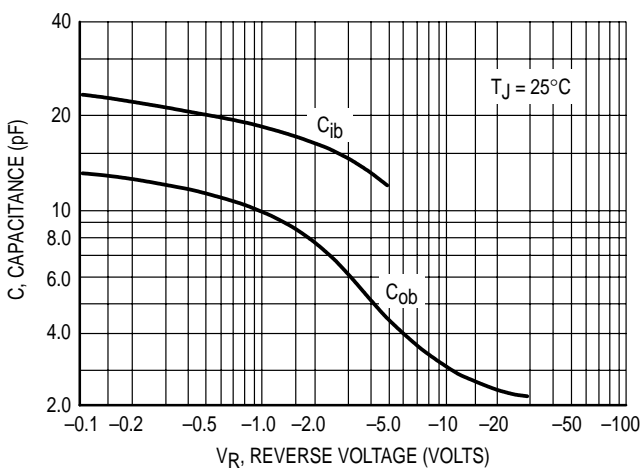


Figure 11. Capacitance

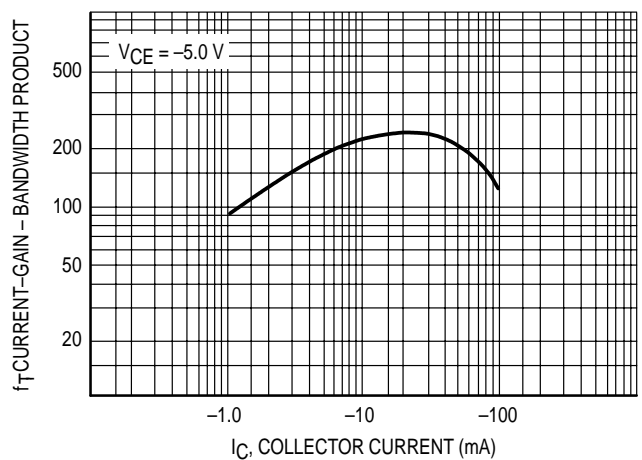


Figure 12. Current-Gain - Bandwidth Product



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### 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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