

**BC556A/B/C**  
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**PNP Silicon**  
**Amplifier Transistor**  
**625mW**

**Features**

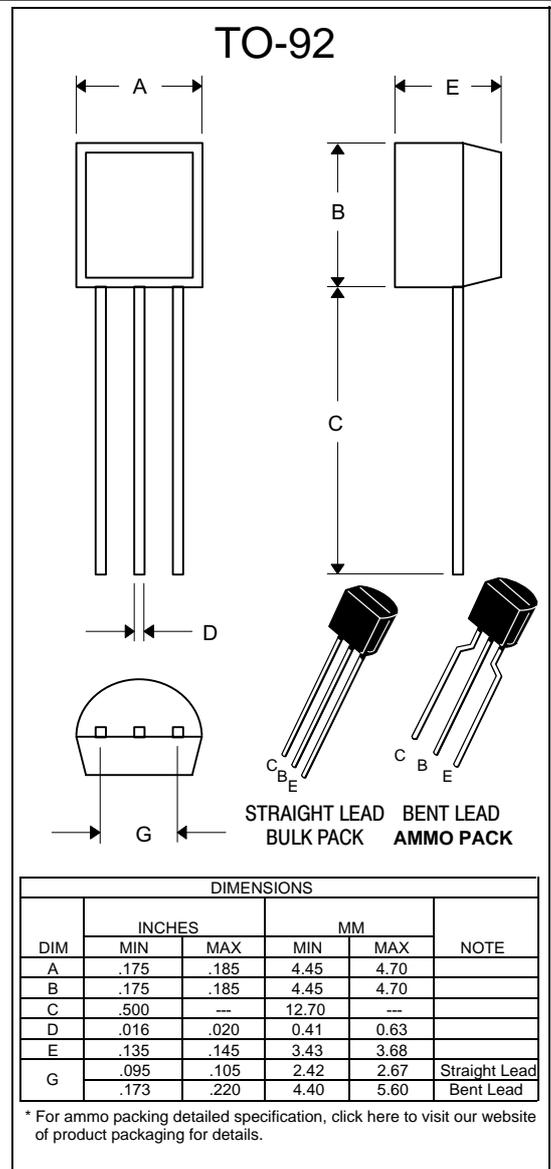
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- 150°C Junction Temperature
- Through Hole Package
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: Type Number
- Halogen free available upon request by adding suffix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



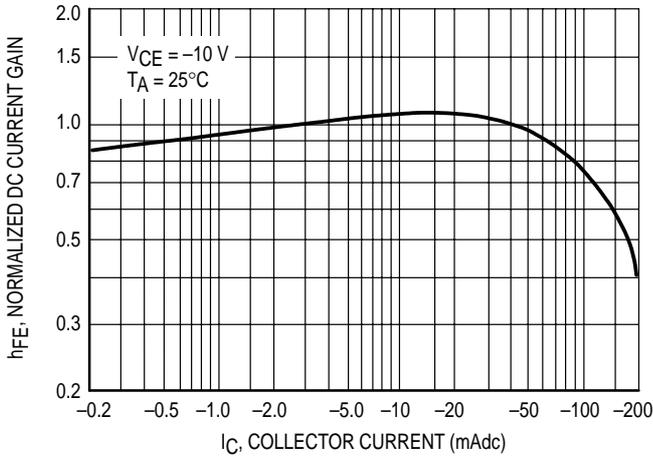
**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)**

Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BC556	V <sub>(BR)CBO</sub>	I <sub>C</sub> = -0.1mA, I <sub>E</sub> =0	-80			V
	BC557			-50			
	BC558			-30			
Collector-emitter breakdown voltage	BC556	V <sub>(BR)CEO</sub>	I <sub>C</sub> =-2mA, I <sub>B</sub> =0	-65			V
	BC557			-45			
	BC558			-30			
Emitter-base breakdown voltage		V <sub>(BR)EBO</sub>	I <sub>E</sub> =-100μA, I <sub>C</sub> =0	-5			V
Collector cut-off current	BC556	I <sub>CBO</sub>	V <sub>CB</sub> =-70V, I <sub>E</sub> =0			-0.1	μA
	BC557		V <sub>CB</sub> =-45V, I <sub>E</sub> =0			-0.1	μA
	BC558		V <sub>CB</sub> =-25V, I <sub>E</sub> =0			-0.1	μA
Collector cut-off current	BC556	I <sub>CEO</sub>	V <sub>CE</sub> =-60V, I <sub>B</sub> =0			-0.1	μA
	BC557		V <sub>CE</sub> =-40V, I <sub>B</sub> =0			-0.1	μA
	BC558		V <sub>CE</sub> =-25V, I <sub>B</sub> =0			-0.1	μA
Emitter cut-off current		I <sub>EBO</sub>	V <sub>EB</sub> =-5V, I <sub>C</sub> =0			-0.1	μA
DC current gain		h <sub>FE</sub> *	V <sub>CE</sub> =-5V, I <sub>C</sub> =-2mA	120		800	
Collector-emitter saturation voltage		V <sub>CE(sat)</sub>	I <sub>C</sub> =-10mA, I <sub>B</sub> =-0.5mA			-0.3	V
			I <sub>C</sub> =-100mA, I <sub>B</sub> =-5mA			-0.65	V
Base-emitter saturation voltage		V <sub>BE(sat)</sub>	I <sub>C</sub> =-10mA, I <sub>B</sub> =-0.5mA			-0.8	V
			I <sub>C</sub> =-100mA, I <sub>B</sub> =-5mA			-1	V
Base-emitter voltage		V <sub>BE</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-2mA	-0.55		-0.7	V
			V <sub>CE</sub> =-5V, I <sub>C</sub> =-10mA			-0.82	V
Collector output capacitance		C <sub>ob</sub>	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz			6	pF
Transition frequency	BC556	f <sub>T</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-10mA, f=100MHz		150		MHz
	BC557				150		MHz
	BC558				150		MHz

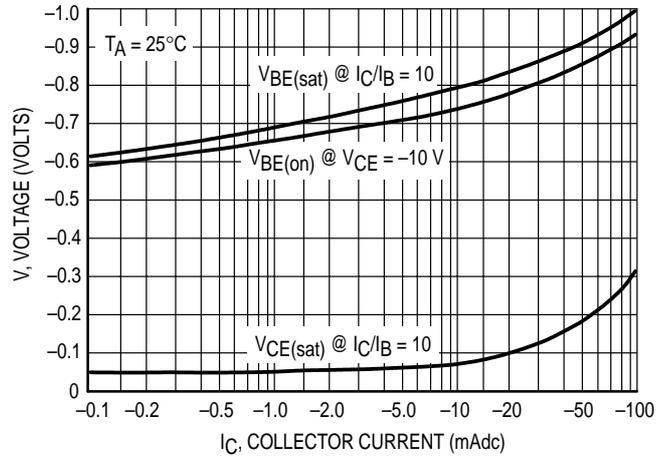
**CLASSIFICATION of h<sub>FE</sub>**

RANK	A	B	C
RANGE	120-220	180-460	420-800

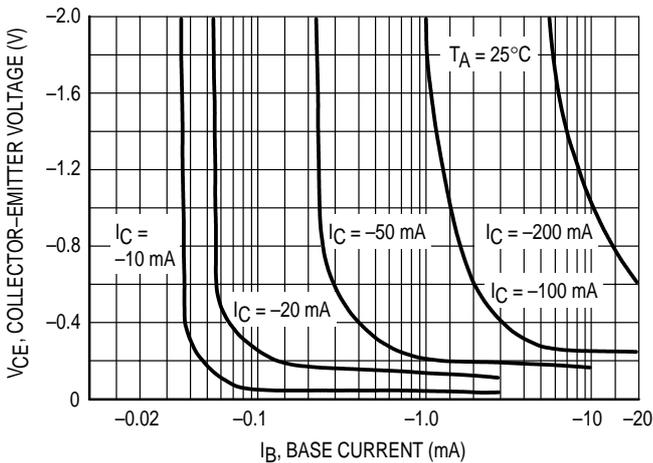
## BC557/BC558



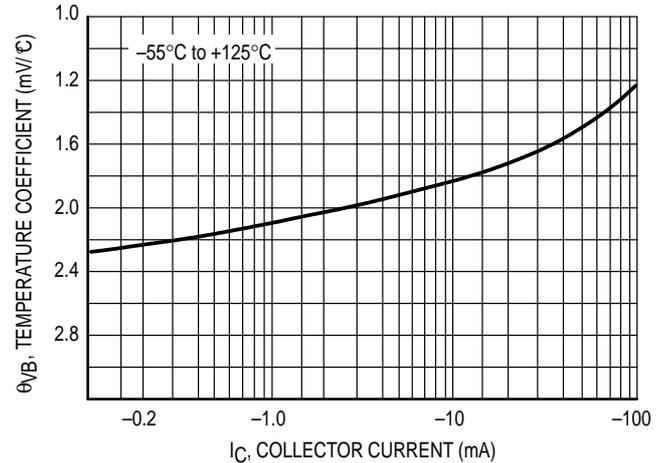
**Figure 1. Normalized DC Current Gain**



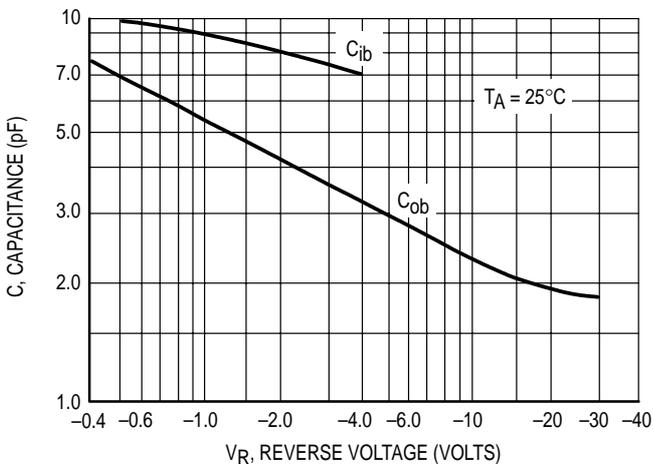
**Figure 2. "Saturation" and "On" Voltages**



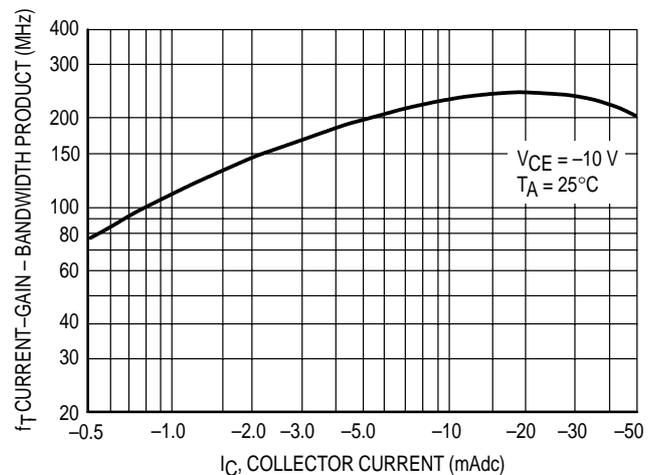
**Figure 3. Collector Saturation Region**



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

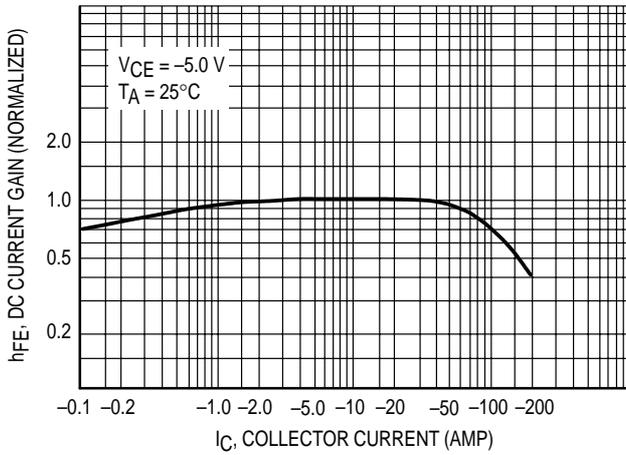


**Figure 5. Capacitances**

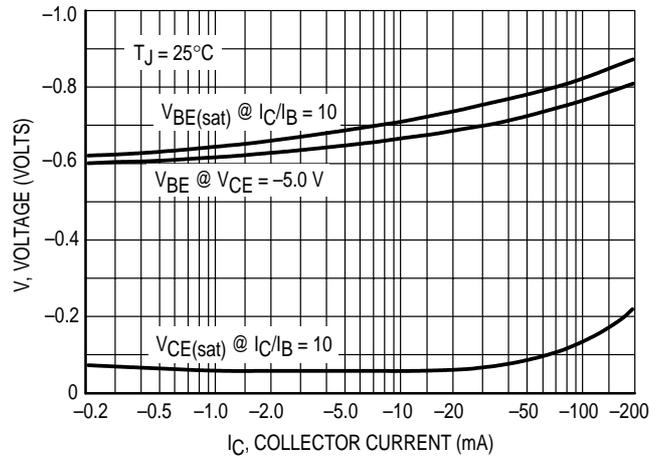


**Figure 6. Current-Gain - Bandwidth Product**

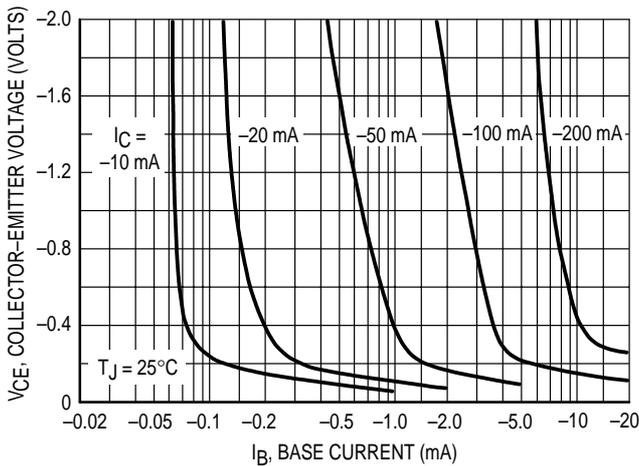
## BC556



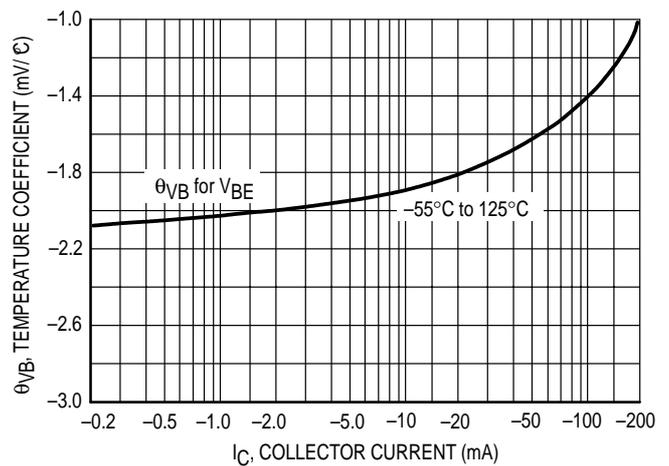
**Figure 7. DC Current Gain**



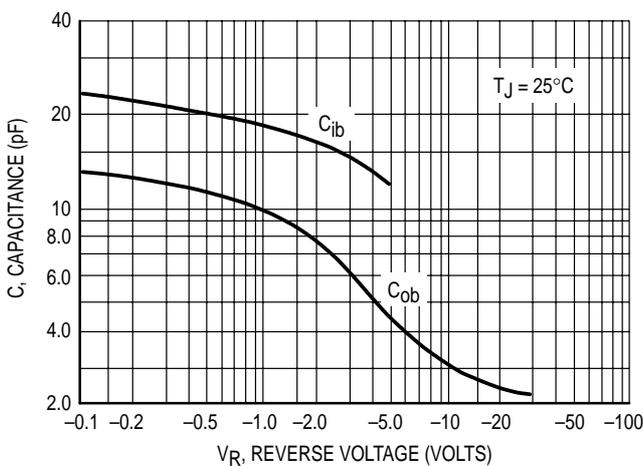
**Figure 8. "On" Voltage**



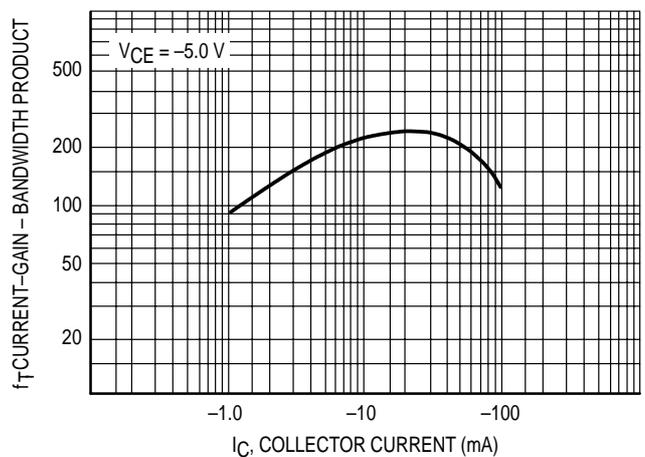
**Figure 9. Collector Saturation Region**



**Figure 10. Base-Emitter Temperature Coefficient**



**Figure 11. Capacitance**



**Figure 12. Current-Gain - Bandwidth Product**



Micro Commercial Components

### 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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