



Micro Commercial Components



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BC556A/B/C BC557A/B/C BC558A/B/C

PNP Silicon Amplifier Transistor 625mW

Features

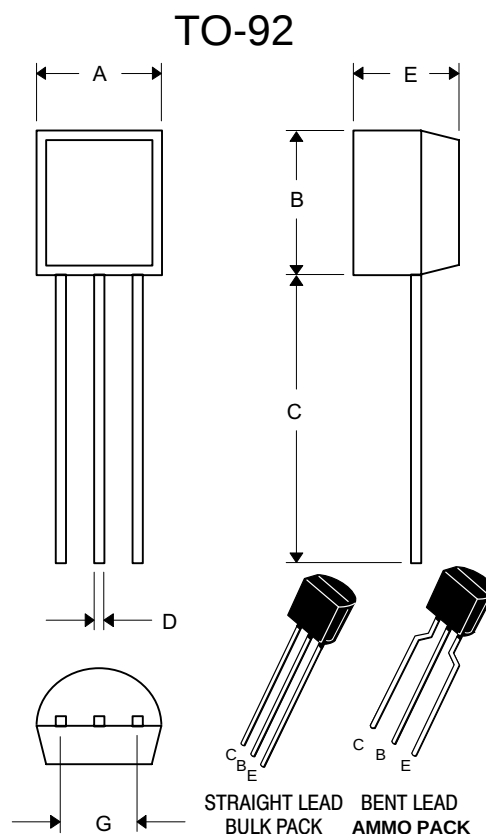
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- 150°C Junction Temperature
- Through Hole Package
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: Type Number
- Halogen free available upon request by adding suffix "-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°C	P _d	625 5.0	mW mW/°C
Power Dissipation@T _C =25°C	P _d	1.5 12	W mW/°C
Thermal Resistance, Junction to Ambient Air	R _{θJA}	200	°C/W
Thermal Resistance, Junction to Case	R _{θJC}	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.

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

Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BC556	$V_{(BR)CBO}$	$I_C = -0.1\text{mA}, I_E = 0$	-80			V
	BC557			-50			
	BC558			-30			
Collector-emitter breakdown voltage	BC556	$V_{(BR)CEO}$	$I_C = -2\text{mA}, I_B = 0$	-65			V
	BC557			-45			
	BC558			-30			
Emitter-base breakdown voltage		$V_{(BR)EBO}$	$I_E = -100\mu\text{A}, I_C = 0$	-5			V
Collector cut-off current	BC556	I_{CBO}	$V_{CB} = -70\text{V}, I_E = 0$			-0.1	μA
	BC557		$V_{CB} = -45\text{V}, I_E = 0$			-0.1	μA
	BC558		$V_{CB} = -25\text{V}, I_E = 0$			-0.1	μA
Collector cut-off current	BC556	I_{CEO}	$V_{CE} = -60\text{V}, I_B = 0$			-0.1	μA
	BC557		$V_{CE} = -40\text{V}, I_B = 0$			-0.1	μA
	BC558		$V_{CE} = -25\text{V}, I_B = 0$			-0.1	μA
Emitter cut-off current		I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$			-0.1	μA
DC current gain		h_{FE}^*	$V_{CE} = -5\text{V}, I_C = -2\text{mA}$	120		800	
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = -10\text{mA}, I_B = -0.5\text{mA}$			-0.3	V
			$I_C = -100\text{mA}, I_B = -5\text{mA}$			-0.65	V
Base-emitter saturation voltage		$V_{BE(sat)}$	$I_C = -10\text{mA}, I_B = -0.5\text{mA}$			-0.8	V
			$I_C = -100\text{mA}, I_B = -5\text{mA}$			-1	V
Base-emitter voltage		V_{BE}	$V_{CE} = -5\text{V}, I_C = -2\text{mA}$	-0.55		-0.7	V
			$V_{CE} = -5\text{V}, I_C = -10\text{mA}$			-0.82	V
Collector output capacitance		C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$			6	pF
Transition frequency	BC556	f_T	$V_{CE} = -5\text{V}, I_C = -10\text{mA}, f = 100\text{MHz}$		150		MHz
	BC557				150		MHz
	BC558				150		MHz

CLASSIFICATION of h_{FE}

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

BC557/BC558

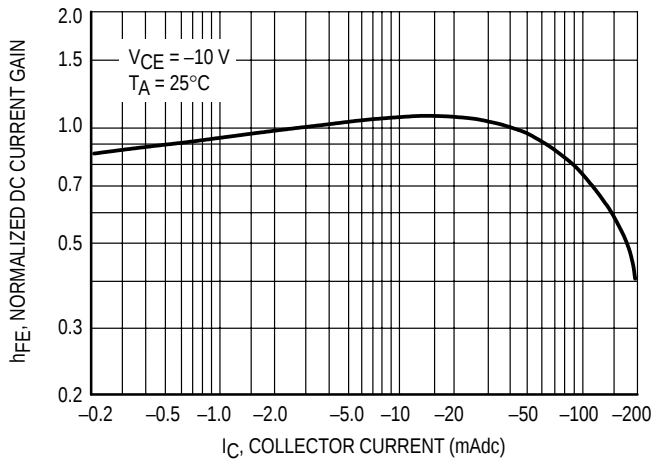


Figure 1. Normalized DC Current Gain

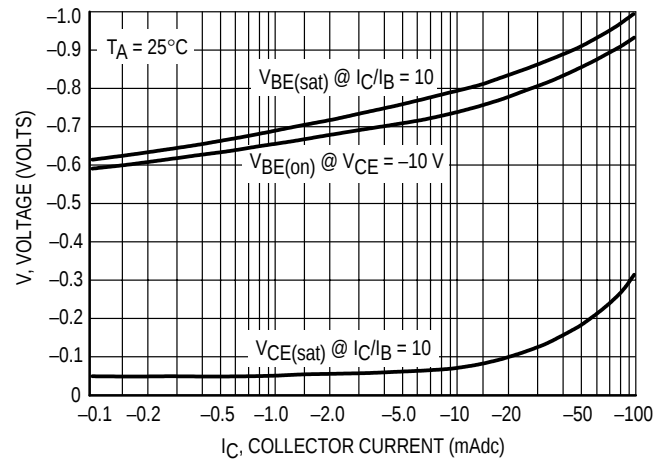


Figure 2. "Saturation" and "On" Voltages

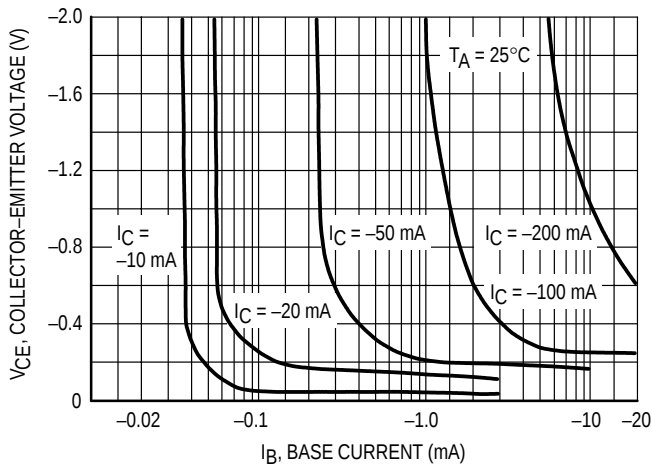


Figure 3. Collector Saturation Region

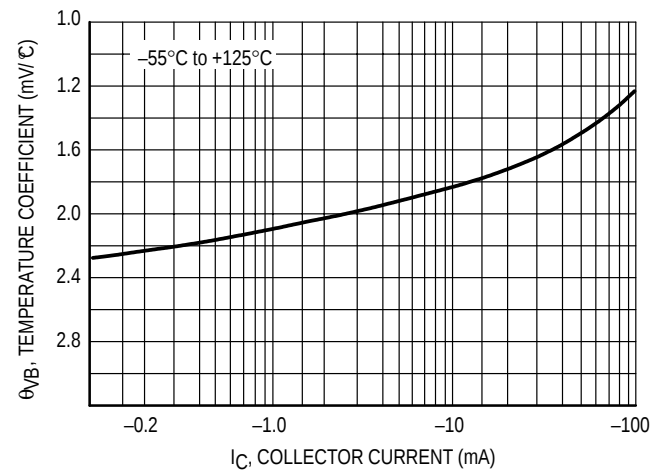


Figure 4. Base-Emitter Temperature Coefficient

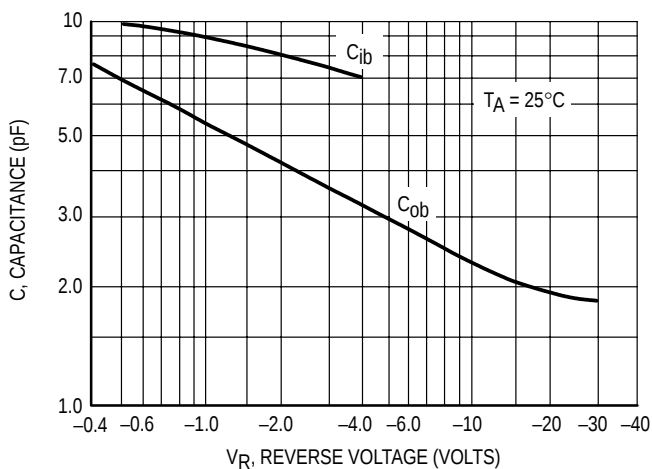


Figure 5. Capacitances

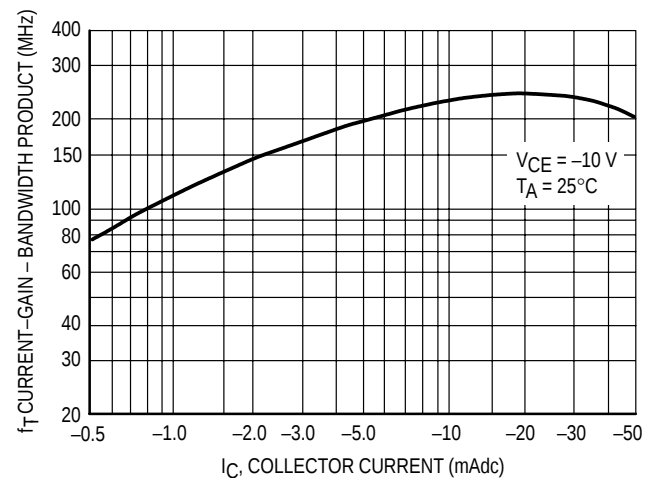


Figure 6. Current-Gain - Bandwidth Product

BC556

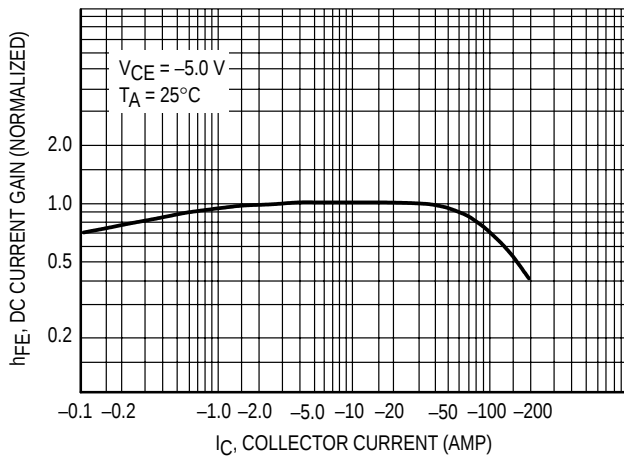


Figure 7. DC Current Gain

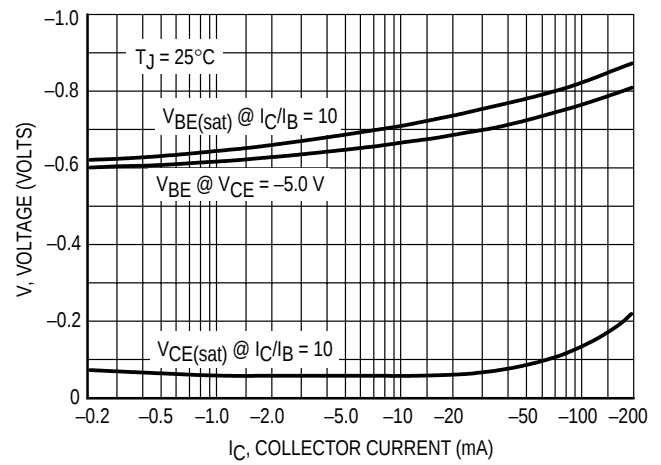


Figure 8. "On" Voltage

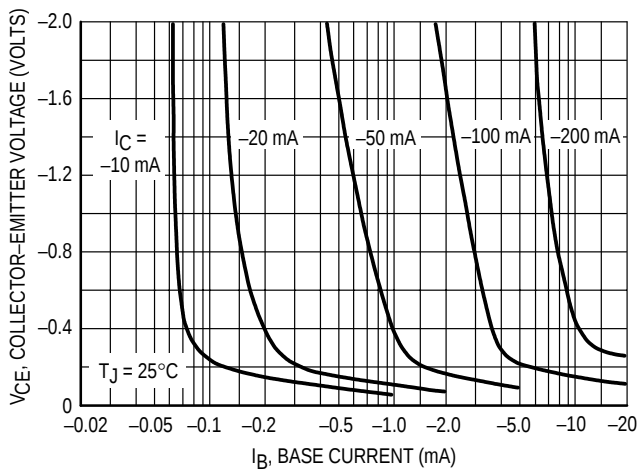


Figure 9. Collector Saturation Region

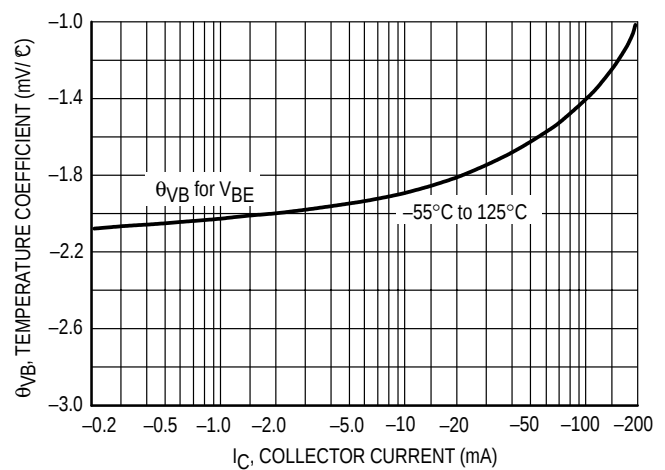


Figure 10. Base-Emitter Temperature Coefficient

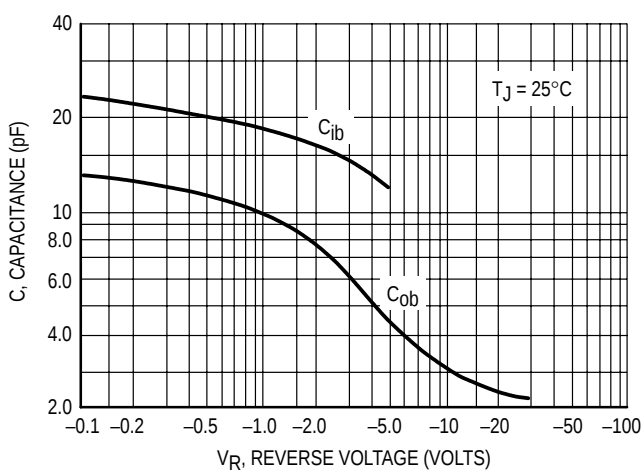


Figure 11. Capacitance

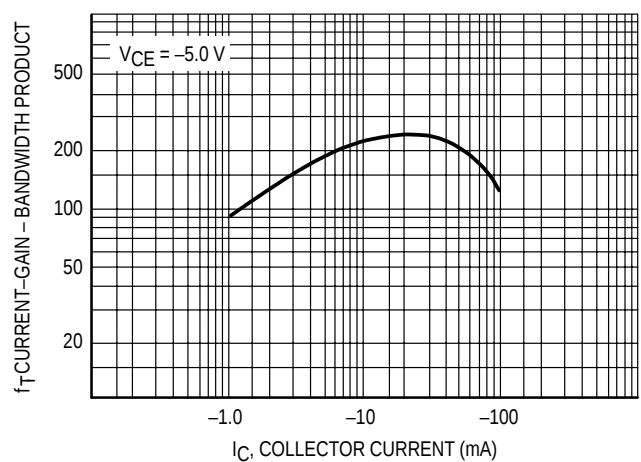


Figure 12. Current-Gain - Bandwidth Product

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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