



TO-92 Plastic-Encapsulate Transistors

BC556/BC557/BC558 TRANSISTOR (PNP)

FEATURES

- High Voltage
- Complement to BC546/BC547/BC548

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage BC556	-80	V
	BC557	-50	
	BC558	-30	
V_{CEO}	Collector-Emitter Voltage	-65	V
		-45	
		-30	
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-100	mA
P_C	Collector Power Dissipation	625	mW
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$

TO-92

1. COLLECTOR

2. BASE

3. EMITTER

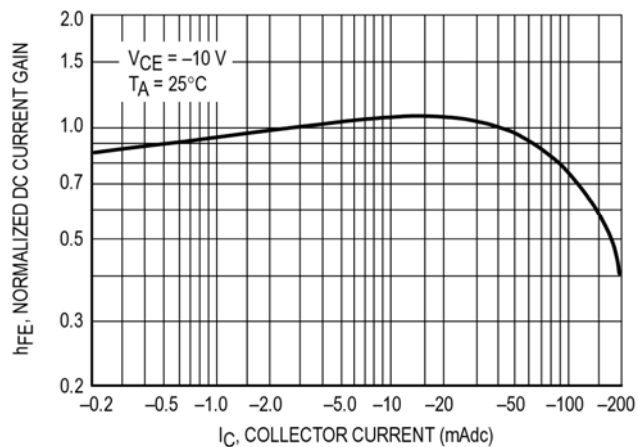


ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

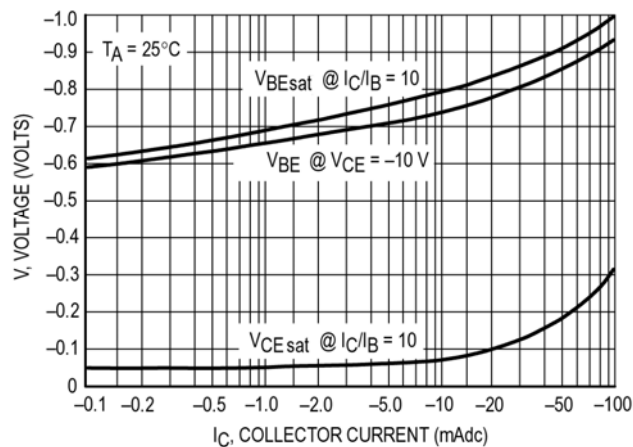
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	BC556 BC557 BC558 V_{CBO}	$I_C = -100\mu\text{A}$, $I_E = 0$	-80 -50 -30			V
Collector-emitter breakdown voltage	BC556 BC557 BC558 V_{CEO}	$I_C = -2\text{mA}$, $I_B = 0$	-65 -45 -30			V
Emitter-base breakdown voltage	V_{EBO}	$I_E = -100\mu\text{A}$, $I_C = 0$	-5			V
Collector cut-off current	BC556 BC557 BC558 I_{CBO}	$V_{CB} = -70\text{V}$, $I_E = 0$ $V_{CB} = -45\text{V}$, $I_E = 0$ $V_{CB} = -25\text{V}$, $I_E = 0$			-0.1	μA
Collector cut-off current	BC556 BC557 BC558 I_{CEO}	$V_{CE} = -60\text{V}$, $I_B = 0$ $V_{CE} = -40\text{V}$, $I_B = 0$ $V_{CE} = -25\text{V}$, $I_B = 0$			-0.1	μA
Emitter cut-off current	BC556 BC557 BC558 I_{EBO}	$V_{EB} = -5\text{V}$, $I_C = 0$			-0.1	μA
DC current gain	BC556 BC557 BC558 BC557A BC556B/BC557B/BC558B BC557C h_{FE}	$V_{CE} = -5\text{V}$, $I_C = -2\text{mA}$	120 120 120 120 180 420		800 800 800 220 460 800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}$, $I_B = -5\text{mA}$			-0.65	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -100\text{mA}$, $I_B = -5\text{mA}$			-1	V
Transition frequency	f_T	$V_{CE} = -5\text{V}$, $I_C = -10\text{mA}$ $f = 100\text{MHz}$	150			MHz

Typical Characteristics

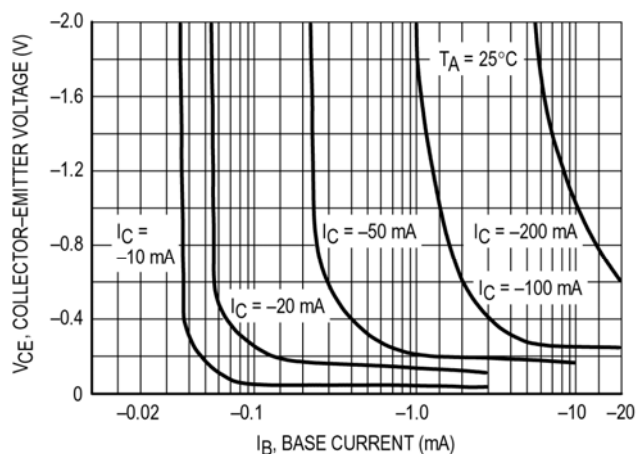
BC557/BC558



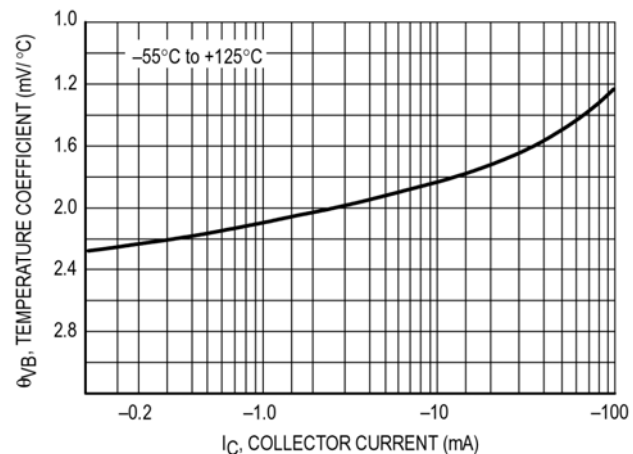
Normalized DC Current Gain



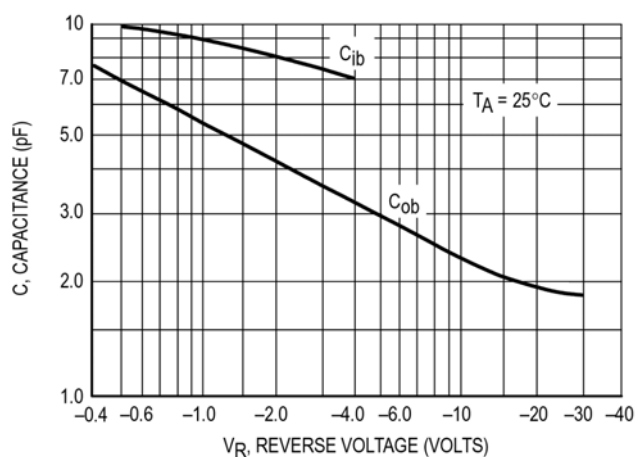
"Saturation" and "On" Voltages



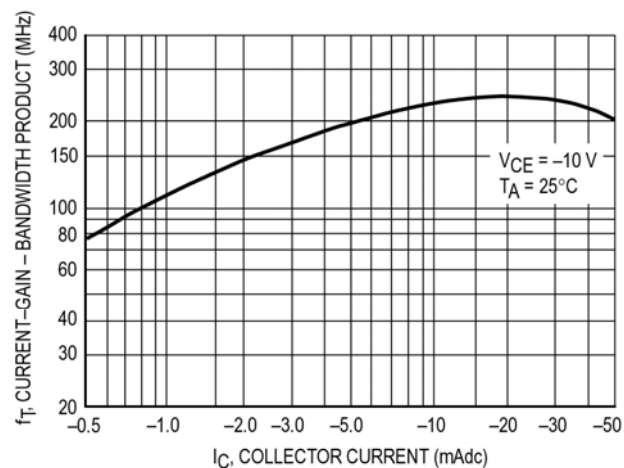
Collector Saturation Region



Base-Emitter Temperature Coefficient

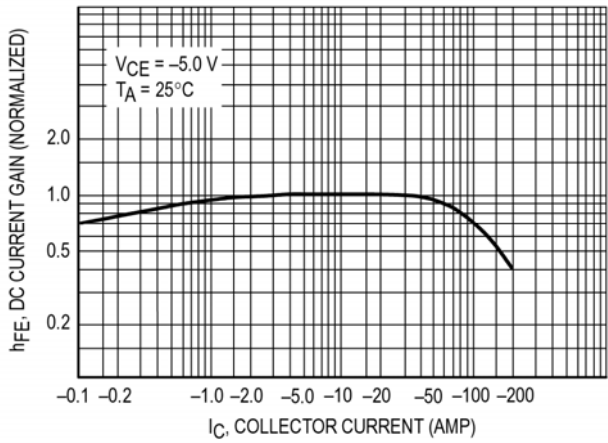


Capacitances

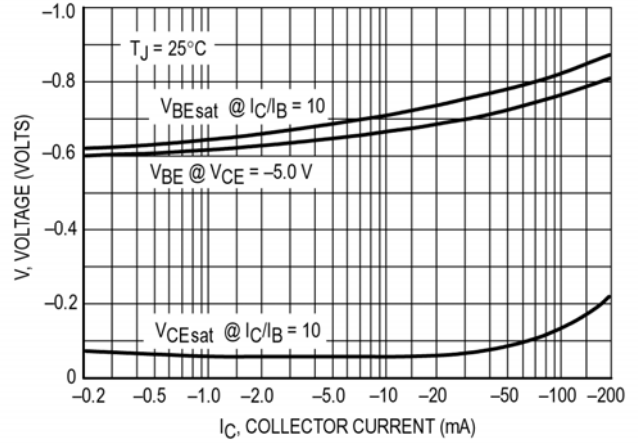


Current-Gain - Bandwidth Product

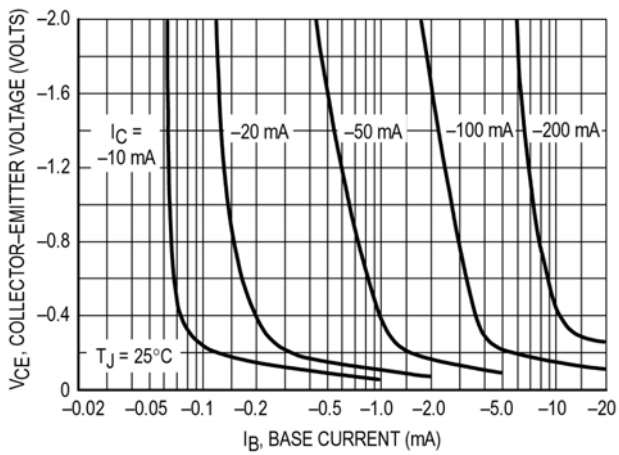
BC556



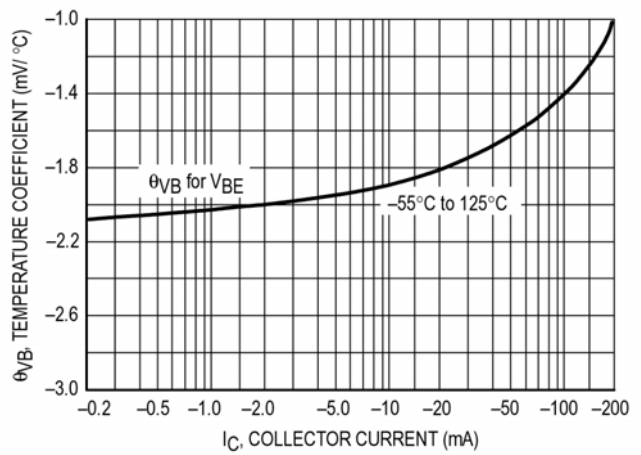
DC Current Gain



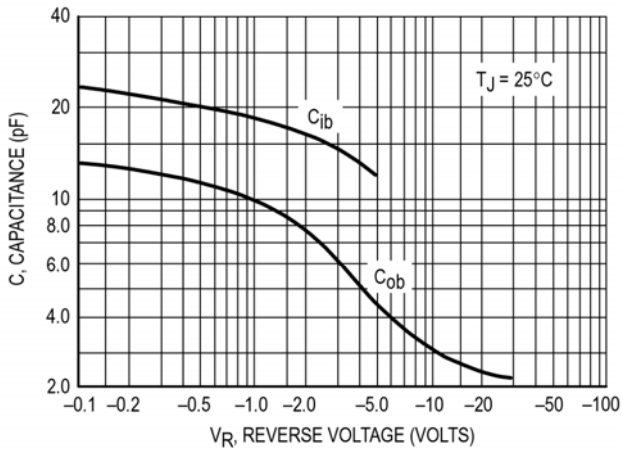
"On" Voltage



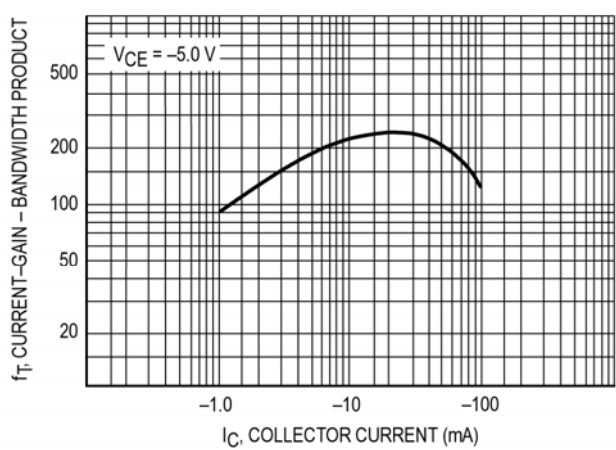
Collector Saturation Region



Base-Emitter Temperature Coefficient

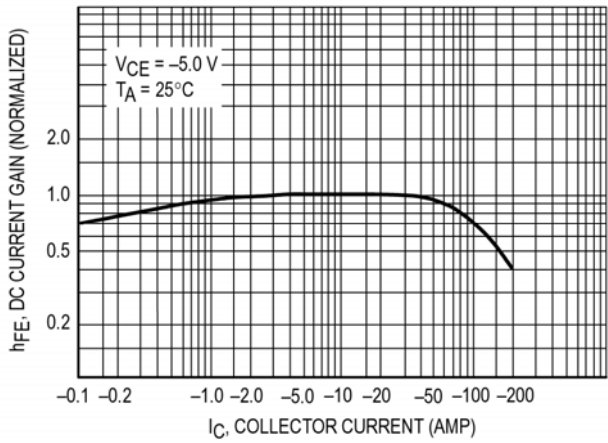


Capacitance

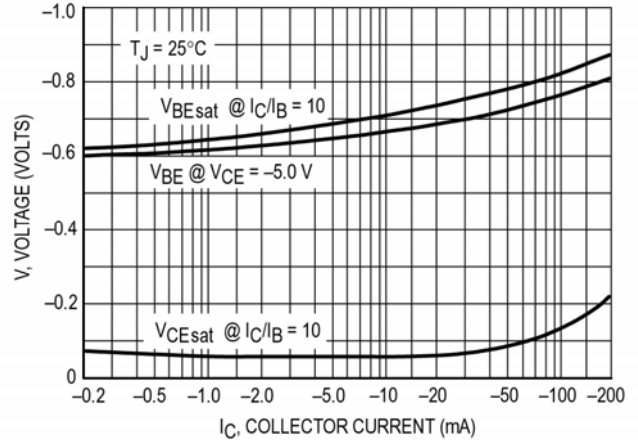


Current-Gain - Bandwidth Product

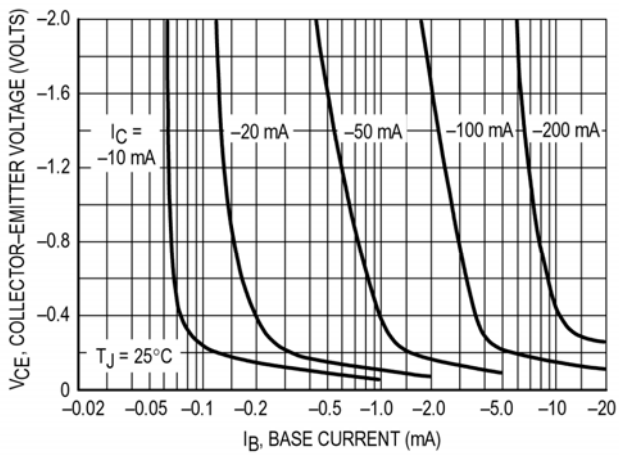
BC556



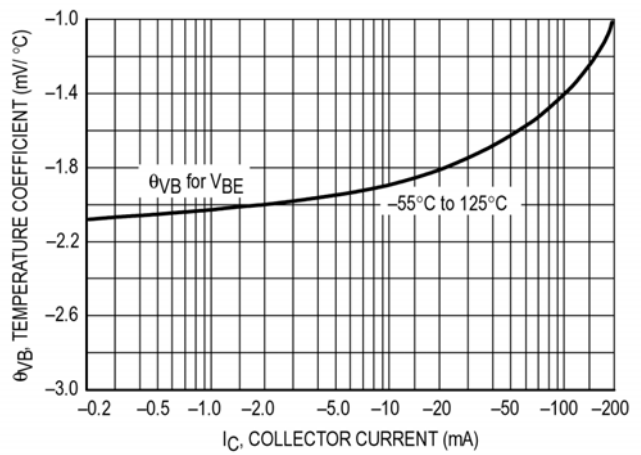
DC Current Gain



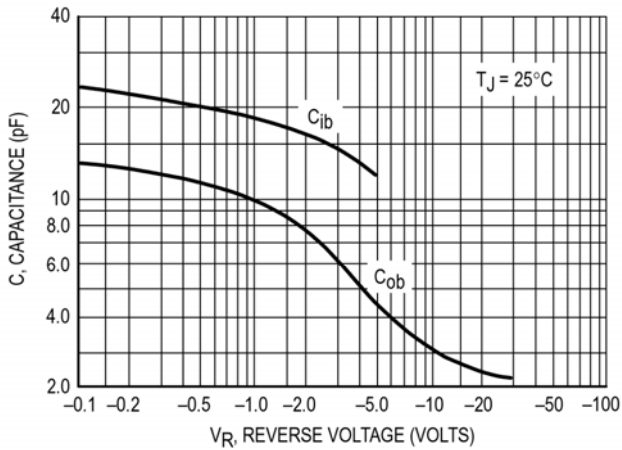
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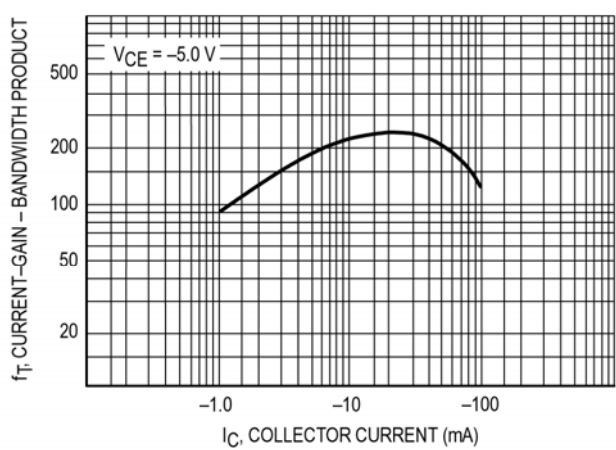
Collector Saturation Region



Base-Emitter Temperature Coefficient



Capacitance



Current-Gain - Bandwidth Product