

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

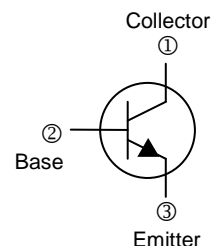
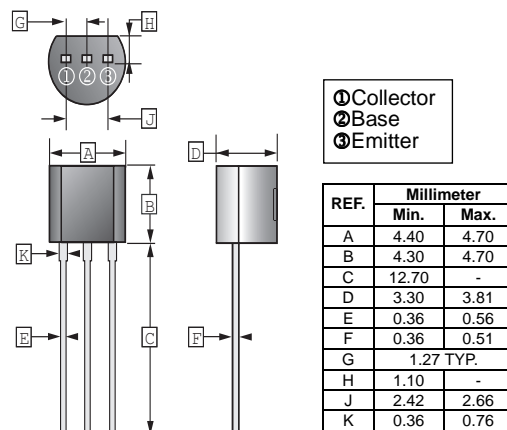
**FEATURE**

- Power Dissipation

**CLASSIFICATION OF  $h_{FE}$**

Product-Rank	BC546A	BC546B	BC546C
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Range	110~220	200~450	420~800

**TO-92**



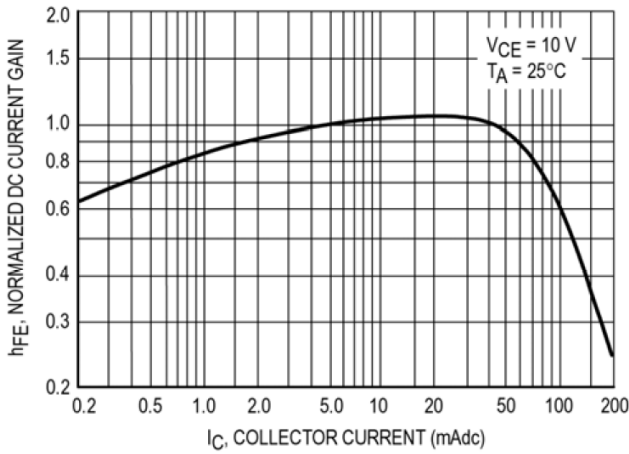
**ABSOLUTE MAXIMUM RATINGS** ( $T_A = 25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	$V_{CBO}$	80	V
		50	
		30	
Collector to Emitter Voltage	$V_{CEO}$	65	V
		45	
		30	
Emitter to Base Voltage	$V_{EBO}$	6	V
Collector Current - Continuous	$I_C$	100	mA
Total Device Dissipation	$P_D$	625	mW
Junction, Storage Temperature	$T_J, T_{STG}$	150, -55~150	$^\circ\text{C}$

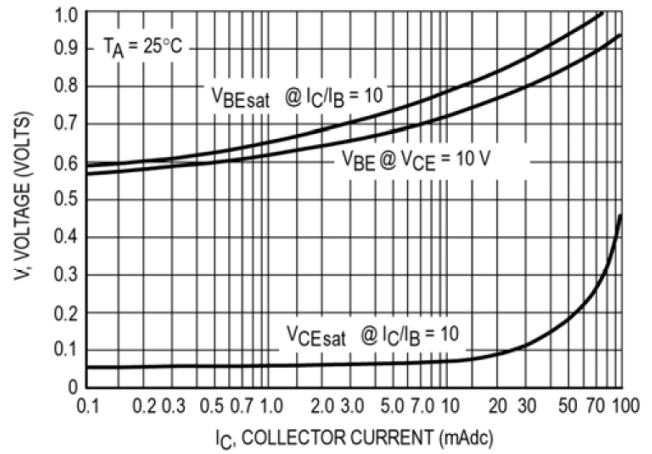
**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector to Base Breakdown Voltage	BC546	80	-	-	V	$I_C=100\mu\text{A}, I_E=0$
	BC547	50	-	-		
	BC548	30	-	-		
Collector to Emitter Breakdown Voltage	BC546	65	-	-	V	$I_C=1\text{mA}, I_B=0$
	BC547	45	-	-		
	BC548	30	-	-		
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	6	-	-	V	$I_E=10\mu\text{A}, I_C=0$
Collector Cut-Off Current	BC546	-	-	0.1	$\mu\text{A}$	$V_{CB}=70\text{V}, I_E=0$
	BC547	-	-	0.1		$V_{CB}=50\text{V}, I_E=0$
	BC548	-	-	0.1		$V_{CB}=30\text{V}, I_E=0$
Collector Cut-Off Current	BC546	-	-	0.1	$\mu\text{A}$	$V_{CE}=60\text{V}, I_B=0$
	BC547	-	-	0.1		$V_{CE}=45\text{V}, I_B=0$
	BC548	-	-	0.1		$V_{CE}=30\text{V}, I_B=0$
Emitter Cut-Off Current	BC546	-	-	0.1	$\mu\text{A}$	$V_{EB}=5\text{V}, I_C=0$
	BC547	-	-	0.1		
	BC548	-	-	0.1		
DC Current Gain	$h_{FE}$	110	-	800		$V_{CE}=5\text{V}, I_C=2\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.3	V	$I_C=100\text{mA}, I_B=5\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	-	-	1.1	V	$I_C=100\text{mA}, I_B=5\text{mA}$
Transition Frequency	$f_T$	150	-	-	MHz	$V_{CE}=5\text{V}, I_C=10\text{mA}, f=100\text{MHz}$

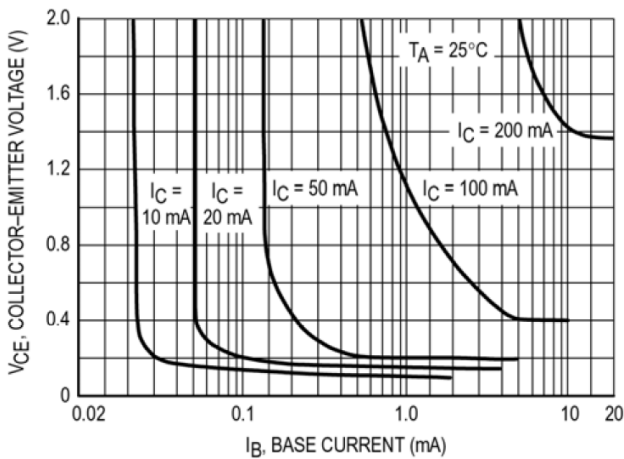
**CHARACTERISTIC CURVES**



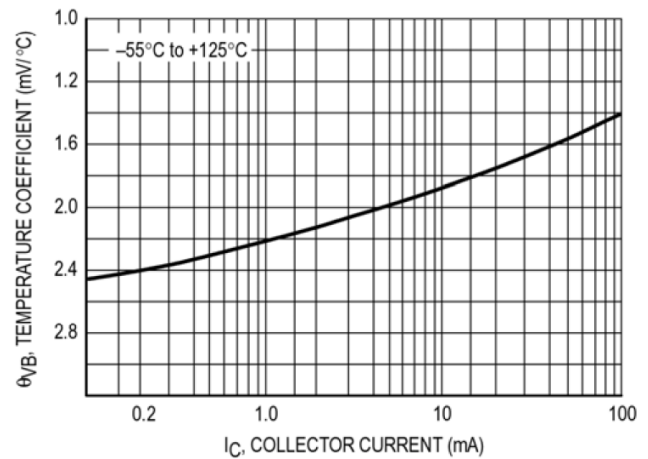
**Normalized DC Current Gain**



**“Saturation” and “On” Voltages**

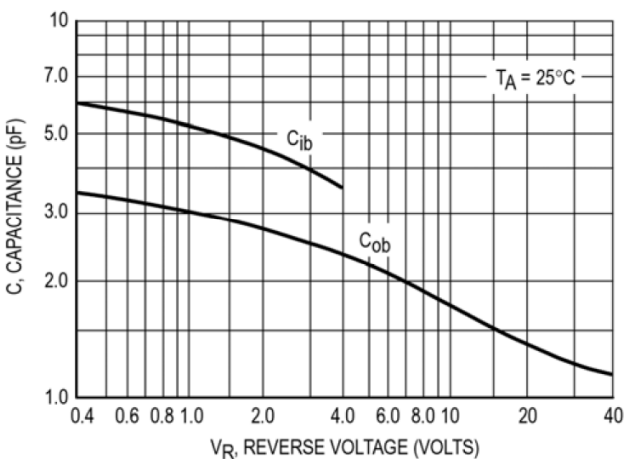


**Collector Saturation Region**

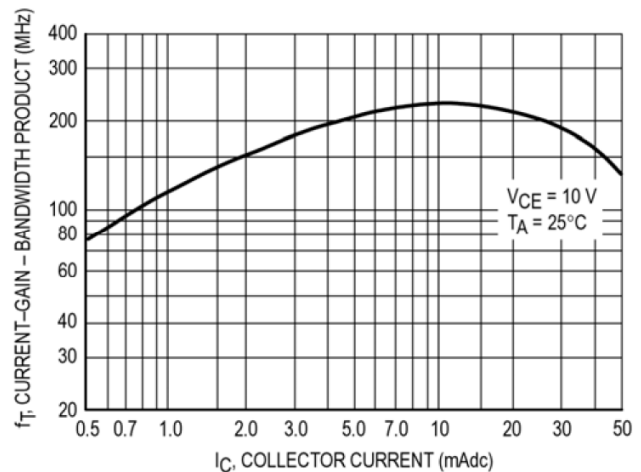


**Base-Emitter Temperature Coefficient**

**BC547/BC548**



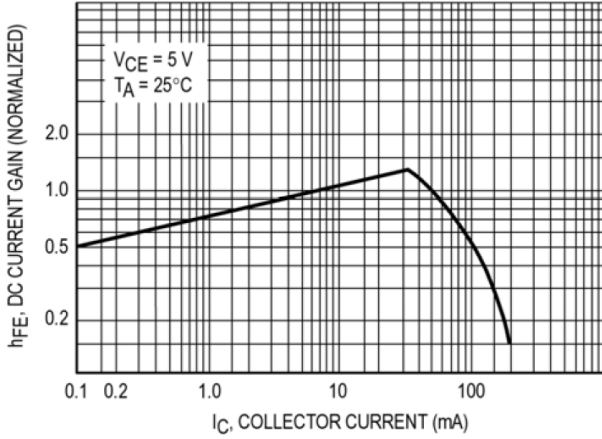
**Capacitances**



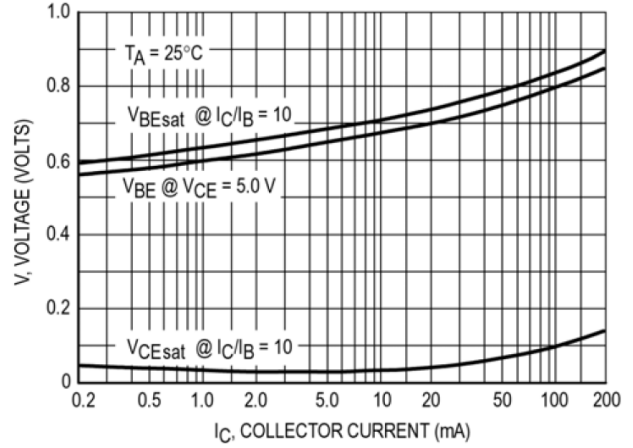
**Current-Gain - Bandwidth Product**

**CHARACTERISTIC CURVES**

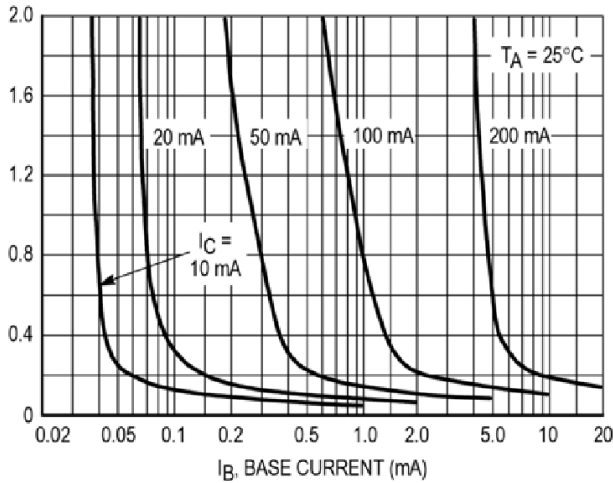
**BC547/BC548**



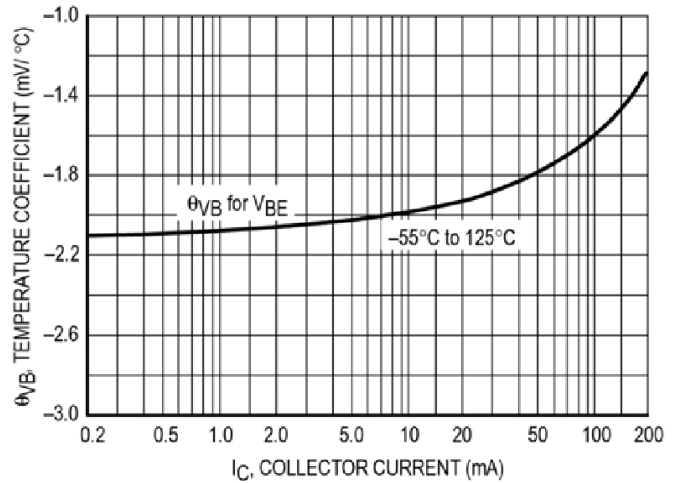
**DC Current Gain**



**"On" Voltage**

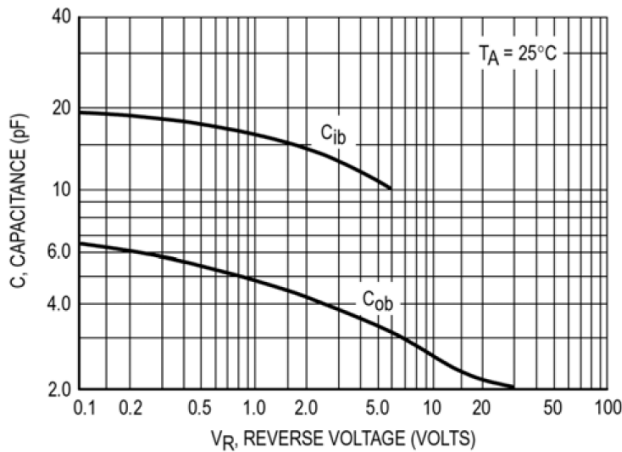


**Collector Saturation Region**

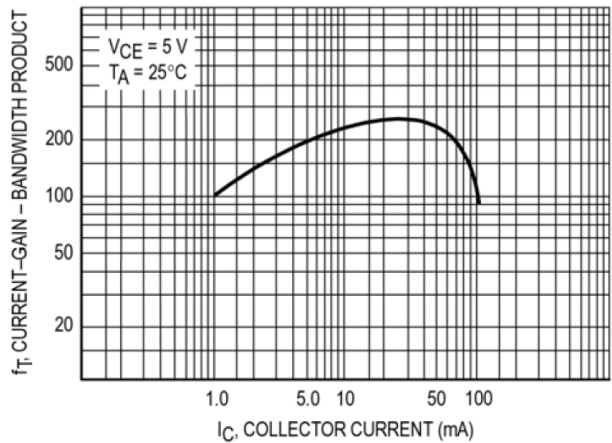


**Base-Emitter Temperature Coefficient**

**BC546**



**Capacitance**



**Current-Gain - Bandwidth Product**