



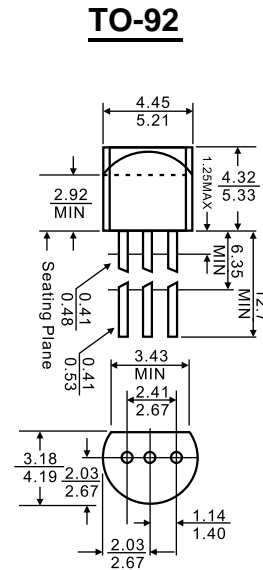
1. COLLECTOR
2. BASE
3. EMITTER

### Features

- ◇ High Voltage
- ◇ Complement to BC556,BC557,BC558

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

Symbol	Parameter	Value	Units		
V <sub>CBO</sub>	Collector-Base Voltage	BC546 BC547 BC548	80 50 30	V	
	V <sub>CEO</sub>	Collector-Emitter Voltage	BC546 BC547 BC548		65 45 30
		V <sub>EBO</sub>	Emitter-Base Voltage		6
I <sub>C</sub>		Collector Current -Continuous	100	mA	
P <sub>D</sub>	Total Device Dissipation	625	mW		
T <sub>J</sub>	Junction Temperature	150	°C		
T <sub>stg</sub>	Storage Temperature	-55-150	°C		

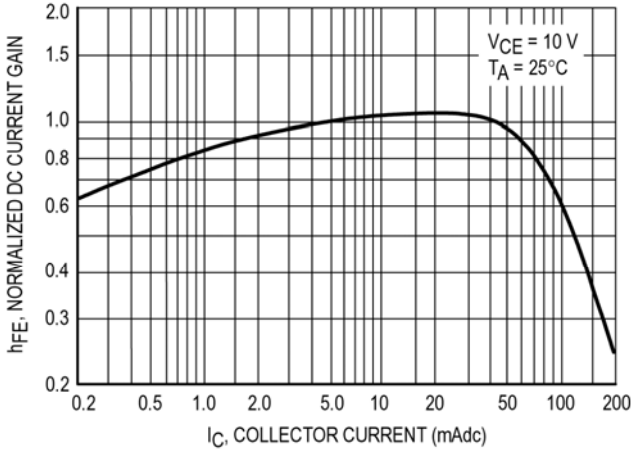


Dimensions in inches and (millimeters)

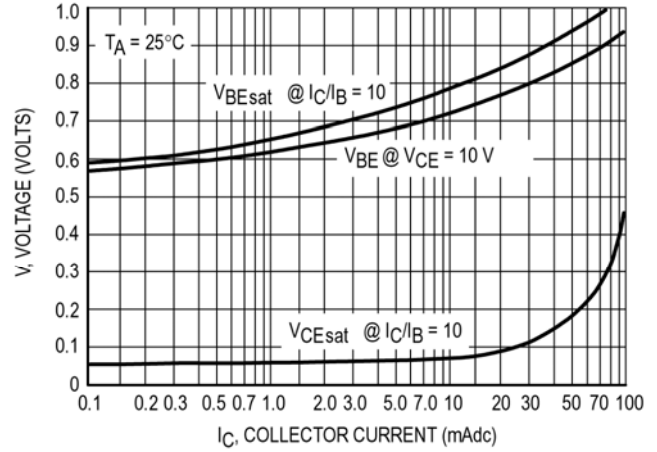
### ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT				
Collector-base breakdown voltage	V <sub>CBO</sub>	I <sub>C</sub> = 100μA, I <sub>E</sub> = 0	BC546	80	V				
			BC547	50					
			BC548	30					
Collector-emitter breakdown voltage	V <sub>CEO</sub>	I <sub>C</sub> = 1mA, I <sub>B</sub> = 0	BC546	65	V				
			BC547	45					
			BC548	30					
Emitter-base breakdown voltage	V <sub>EBO</sub>	I <sub>E</sub> = 10μA, I <sub>C</sub> = 0	6		V				
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = 70V, I <sub>E</sub> = 0 V <sub>CB</sub> = 50V, I <sub>E</sub> = 0 V <sub>CB</sub> = 30V, I <sub>E</sub> = 0		0.1	μA				
			Collector cut-off current	I <sub>CEO</sub>		V <sub>CE</sub> = 60V, I <sub>B</sub> = 0 V <sub>CE</sub> = 45V, I <sub>B</sub> = 0 V <sub>CE</sub> = 30V, I <sub>B</sub> = 0		0.1	μA
							Emitter cut-off current	I <sub>EBO</sub>	
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> = 2mA			BC546				
			BC547	110	800				
			BC548	110	800				
			BC546A/BC547A/BC548A	110	220				
			BC546B/BC547B/BC548B	200	450				
			BC546C/BC547C/BC548C	420	800				
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 100mA, I <sub>B</sub> = 5mA		0.3	V				
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 100mA, I <sub>B</sub> = 5mA		1.1	V				
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> = 10mA f = 100MHz	150		MHz				

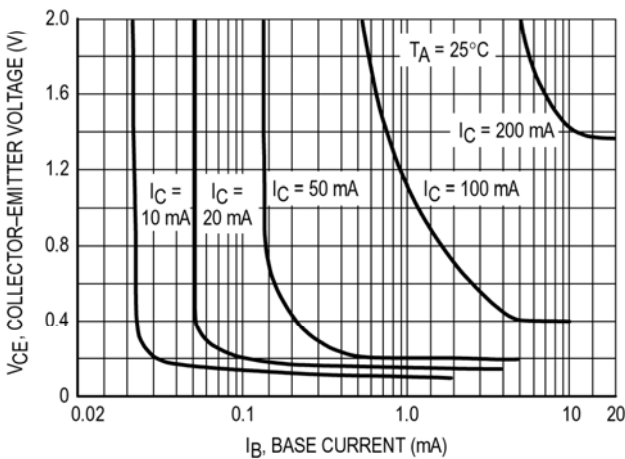
### Typical Characteristics



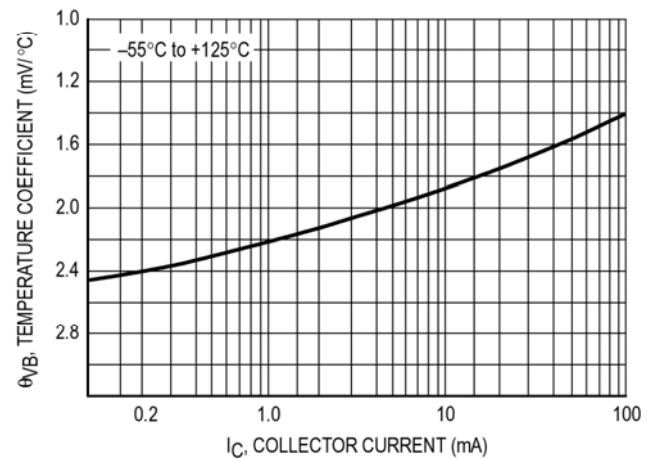
**Normalized DC Current Gain**



**"Saturation" and "On" Voltages**

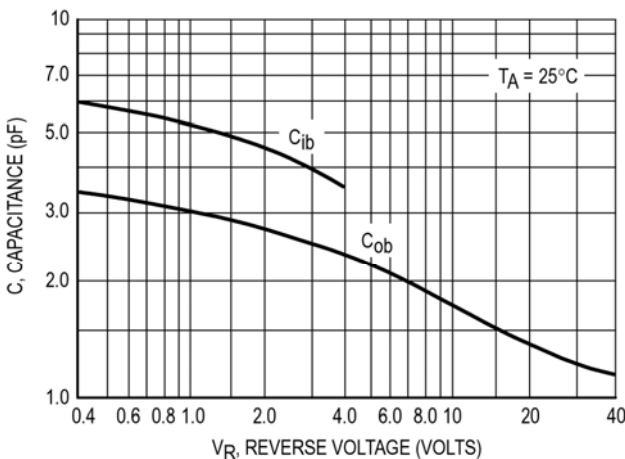


**Collector Saturation Region**

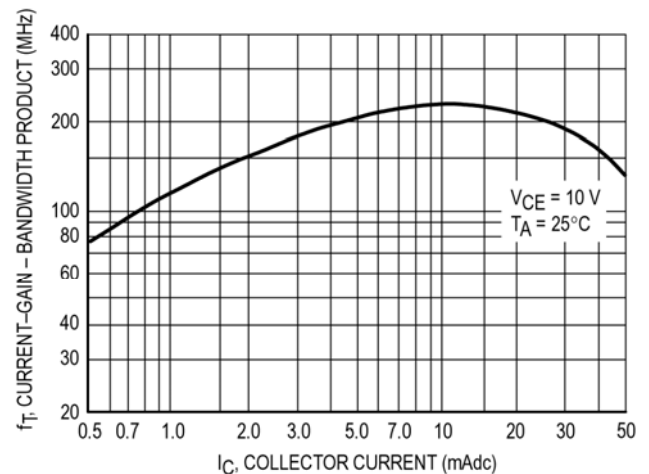


**Base-Emitter Temperature Coefficient**

### BC547/BC548

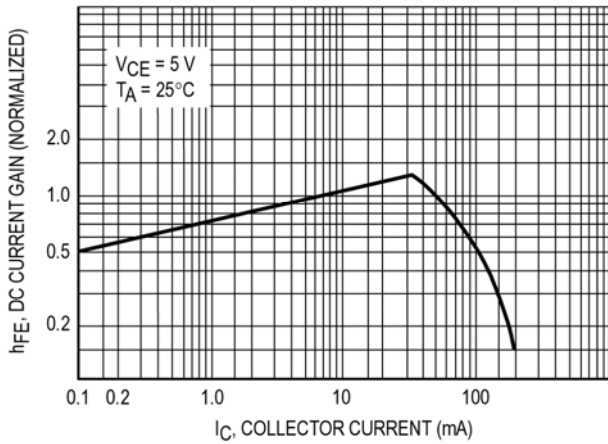


**Capacitances**

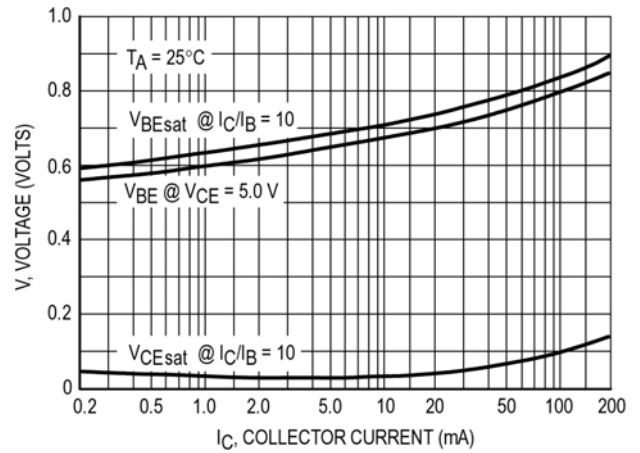


**Current-Gain - Bandwidth Product**

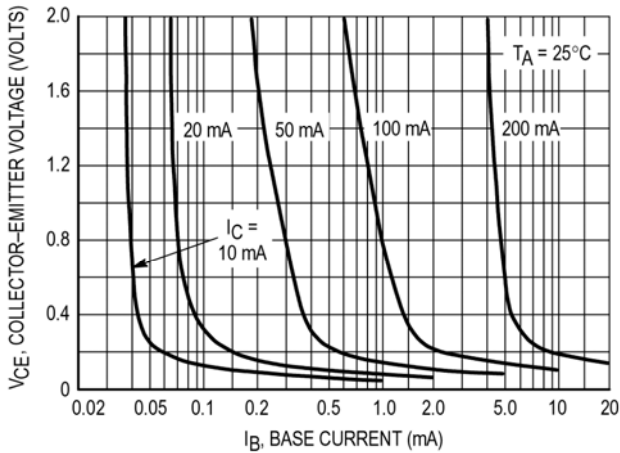
### BC547/BC548



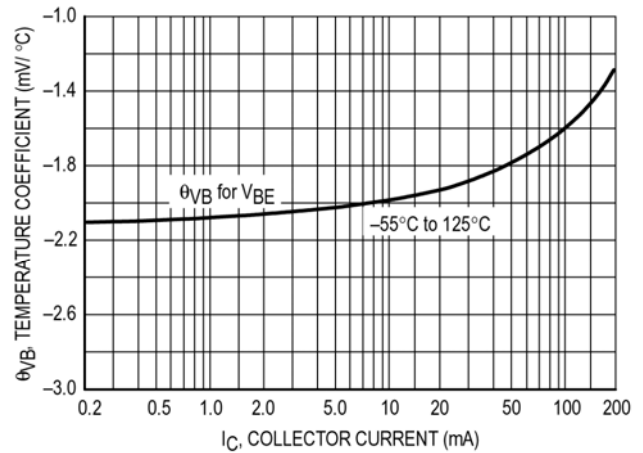
DC Current Gain



"On" Voltage

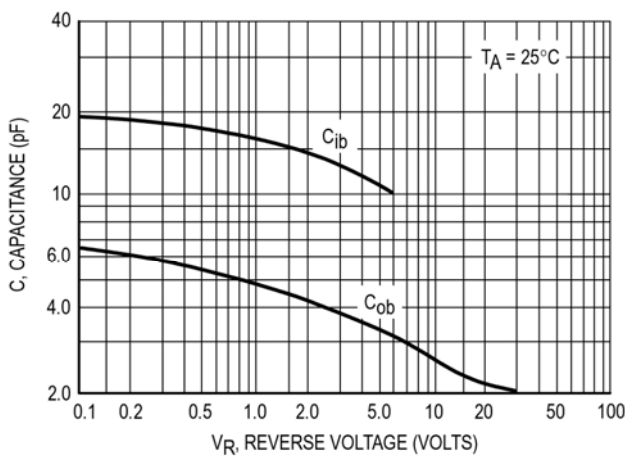


Collector Saturation Region

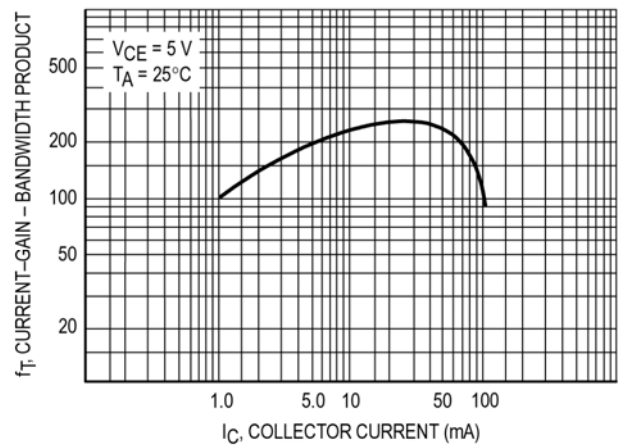


Base-Emitter Temperature Coefficient

### BC546



Capacitance



Current-Gain - Bandwidth Product