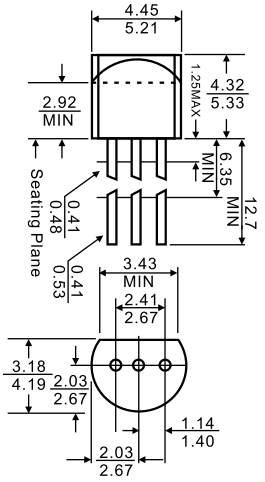
BC546/BC547/BC548(NPN)

TO-92 Bipolar Transistors

1. COLLECTOR
2. BASE
3. EMITTER

TO-92



Dimensions in inches and (millimeters)

Features

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

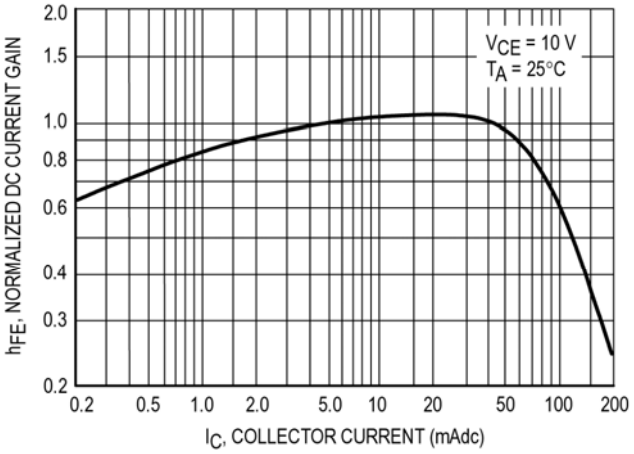
MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter		Value	U s
V_{CBO}	Collector-Base Voltage	C546 BC547 BC548	80 50 30	V
V_{CEO}	Collector-Emitter Voltage	BC546 BC547 BC548	65 45 30	V
V_{EBO}	Emitter-Base Voltage		6	V
I_C	Collector Current -Continuous		100	mA
P_D	Total Device Dissipation		625	mW
T_J	Junction Temperature		150	℃
T_{stg}	Storage Temperature		-55-150	℃

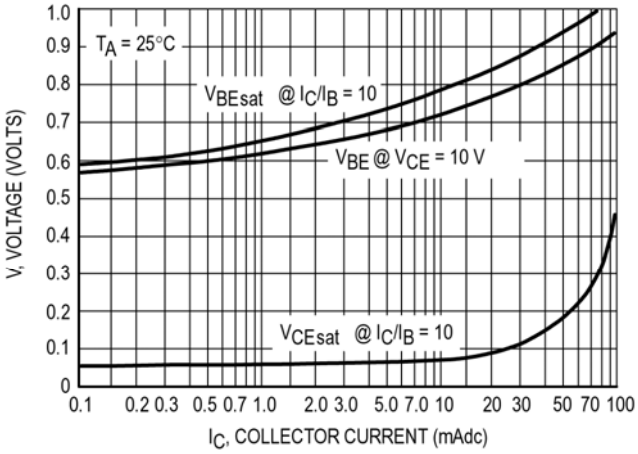
ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter		Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	**BC546** **BC547** **BC548**	V_{CBO}	I_C= 100μA , I_E=0	80 50 30		V
Collector-emitter breakdown voltage	**BC546** **BC547** **BC548**	V_{CEO}	I_C= 1mA , I_B=0	65 45 30		V
Emitter-base breakdown voltage		V_{EBO}	I_E= 10μA, I_C=0	6		V
Collector cut-off current	**BC546** **BC547** **BC548**	I_{CBO}	V_{CB}= 70V, I_E=0 V_{CB}= 50 V, I_E=0 V_{CB}= 30V, I_E=0		0.1	μA
Collector cut-off current	**BC546** **BC547** **BC548**	I_{CEO}	V_{CE}= 60 V, I_B=0 V_{CE}= 45 V, I_B=0 V_{CE}= 30 V, I_B=0		0.1	μA
Emitter cut-off current	**BC546** **BC547** **BC548**	I_{EBO}	V_{EB}= 5V, I_C=0		0.1	μA
DC current gain	**BC546** **BC547** **BC548** **BC546A/BC547A/BC548A** **BC546B/BC547B/BC548B** **BC546C/BC547C/BC548C**	h_{FE}	V_{CE}=5V, I_C= 2mA	110 110 110 110 200 420	800 800 800 220 450 800	
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C=100mA, I_B= 5mA		0.3	V
Base-emitter saturation voltage		$V_{BE(sat)}$	I_C= 100mA, I_B=5mA		1.1	V
Transition frequency		f_T	V_{CE}= 5V, I_C= 10mA f = 100MHz	150		MHz

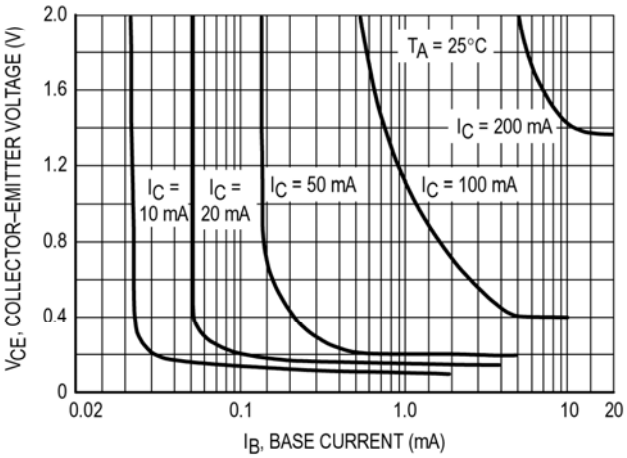
Typical Characteristics



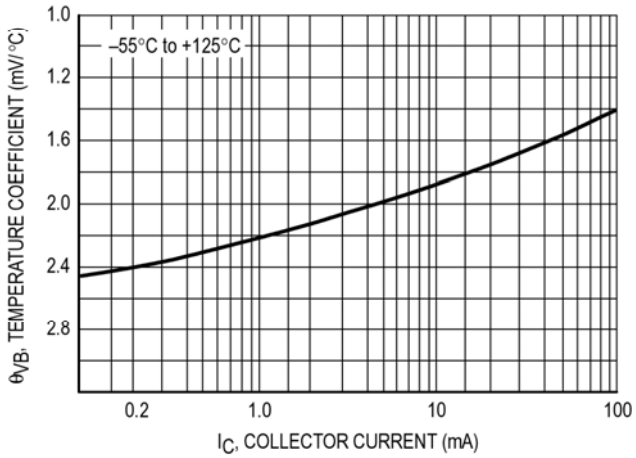
Normalized DC Current Gain



"Saturation" and "On" Voltages

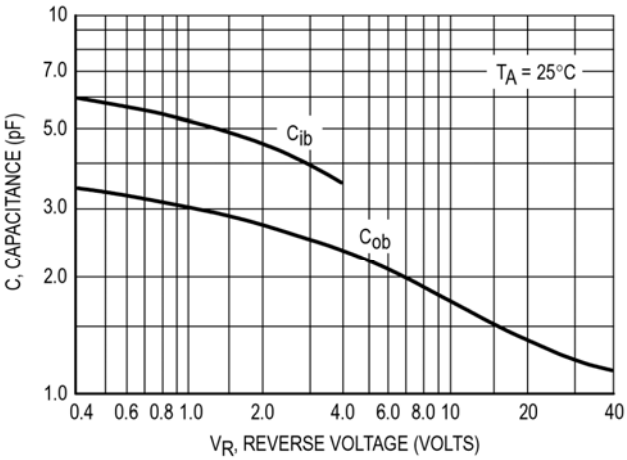


Collector Saturation Region

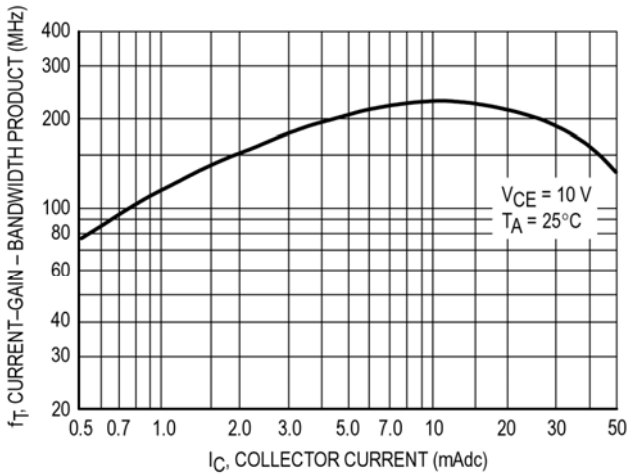


Base–Emitter Temperature Coefficient

BC547/BC548

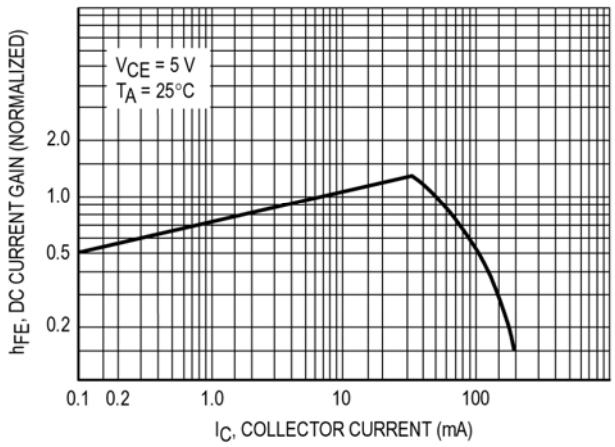


Capacitances

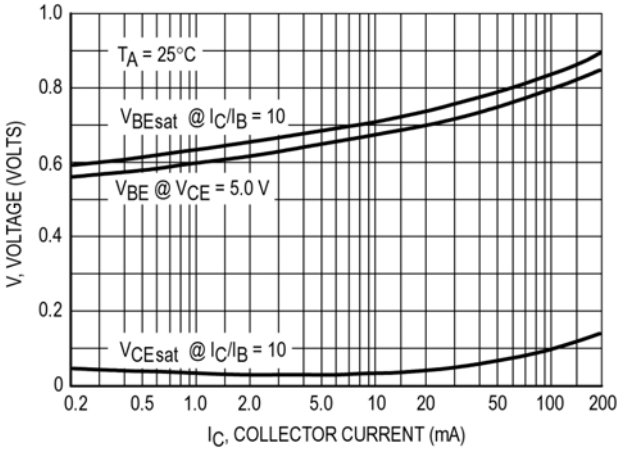


Current–Gain – Bandwidth Product

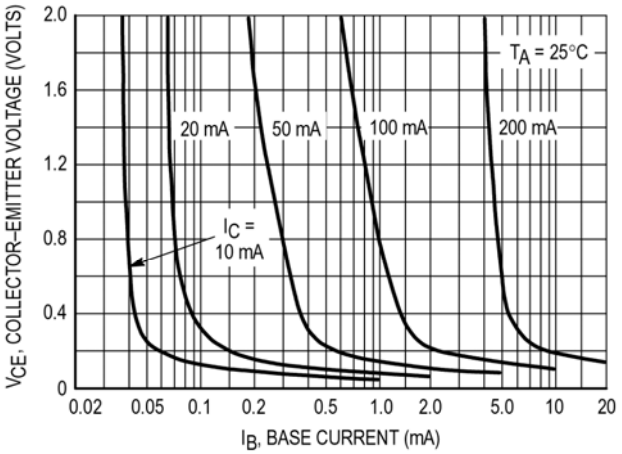
BC547/BC548



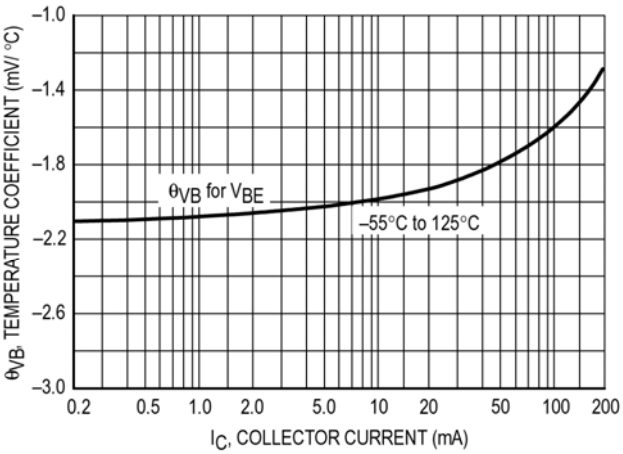
DC Current Gain



"On" Voltage

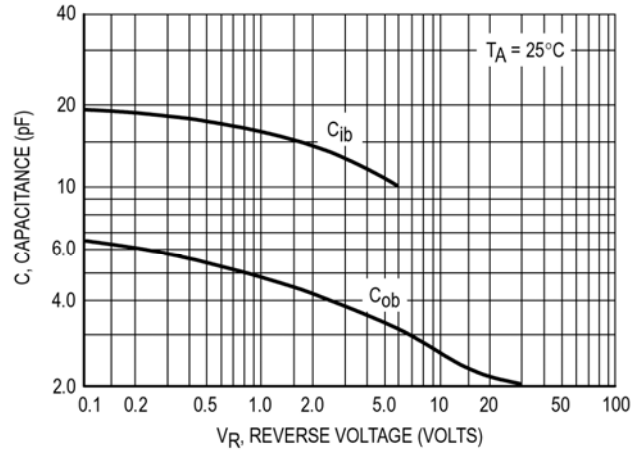


Collector Saturation Region

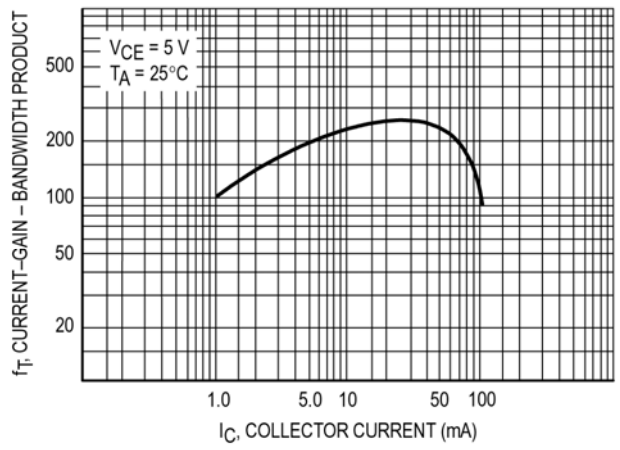


Base–Emitter Temperature Coefficient

BC546



Capacitance



Current–Gain – Bandwidth Product