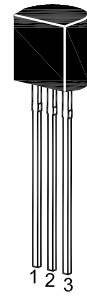


BC546...BC550

NPN Silicon Epitaxial Planar Transistor

for switching and AF amplifier application

These transistors are subdivided into three groups A, B and C according to their current gain.



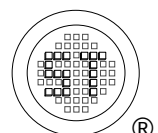
1. Collector 2. Base 3. Emitter
TO-92 Plastic Package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	BC546 BC547, BC550 BC548, BC549	V
		80 50 30	
Collector Emitter Voltage		BC546 BC547, BC550 BC548, BC549	
	V_{CEO}	65 45 30	V
Emitter Base Voltage	V_{EBO}	6	V
Collector Current (DC)	I_C	100	mA
Peak Collector Current	I_{CM}	200	mA
Total Power Dissipation	P_{tot}	500	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = 5\text{ V}$, $I_C = 2\text{ mA}$	h_{FE}	110 200 420	220 450 800	-
Current Gain Group A				
B				
C	h_{FE}			
Collector Base Cutoff Current at $V_{CB} = 30\text{ V}$	I_{CBO}	-	15	nA
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	I_{EBO}	-	100	nA
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CBO}$	80 50 30	- - -	V
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	65 45 30	- - -	V
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	6	-	V



BC546...BC550

Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Max.	Unit
Collector Emitter Saturation Voltage at I _C = 10 mA, I _B = 0.5 mA at I _C = 100 mA, I _B = 5 mA	V _{CE(sat)}	- -	0.25 0.6	V
Base Emitter On Voltage at V _{CE} = 5 V, I _C = 2 mA at V _{CE} = 5 V, I _C = 10 mA	V _{BE(on)}	0.55 -	0.7 0.77	V
Transition Frequency at V _{CE} = 5 V, I _C = 10 mA, f = 100 MHz	f _T	100	-	MHz
Collector Base Capacitance at V _{CB} = 10 V, f = 1 MHz	C _{cb}	-	6	pF

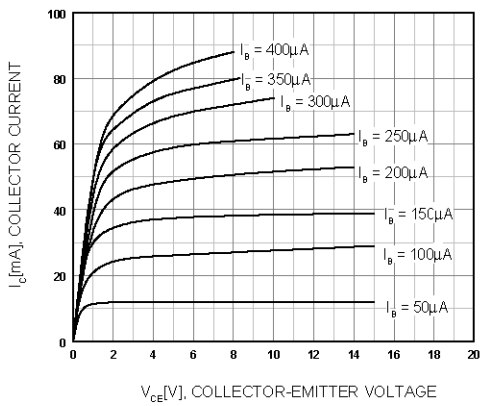


Figure 1. Static Characteristic

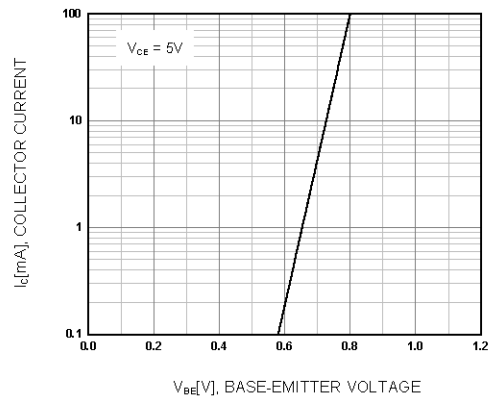


Figure 2. Transfer Characteristic

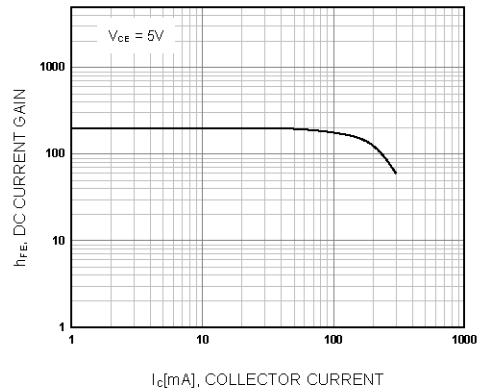


Figure 3. DC current Gain

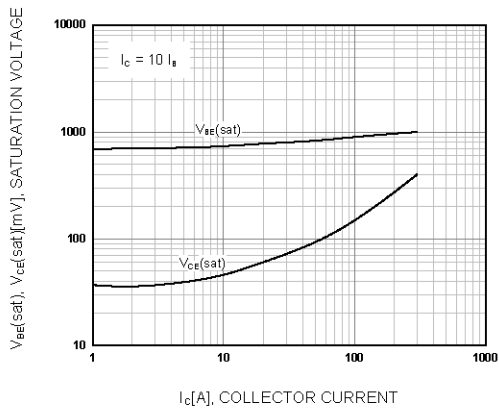


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

