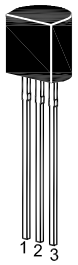
BC182…BC184

NPN Silicon Epitaxial Planar Transistor

for general purpose amplifier applications



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

Absolute Maximum Ratings (T_a = 25 °C)

Parameter		Symbol	Value	Unit
Collector Base Voltage	BC182 BC183, BC184	V_{CBO}	60 45	V
Collector Emitter Voltage	BC182 BC183, BC184	V_{CEO}	50 30	V
Emitter Base Voltage		V_{EBO}	6	V
Collector Current		I_C	100	mA
Total Power Dissipation		P_{tot}	350	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	- 55 to + 150	°C

Characteristics at T_a = 25 °C

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain					
at V_{CE} = 5 V, I_C = 10 µA	BC182, BC183	h_{FE}	40	-	-
	BC184	h_{FE}	100	-	-
at V_{CE} = 5 V, I_C = 2 mA	BC182	h_{FE}	120	500	-
	BC183	h_{FE}	120	800	-
	BC184	h_{FE}	250	800	-
at V_{CE} = 5 V, I_C = 100 mA	BC182, BC183	h_{FE}	80	-	-
	BC184	h_{FE}	130	-	-
Collector Base Cutoff Current					
at V_{CB} = 50 V	BC182	I_{CBO}	-	15	nA
at V_{CB} = 30 V	BC183, BC184		-	15	
Emitter Base Cutoff Current at V_{EB} = 4 V		I_{EBO}	-	15	nA
Collector Base Breakdown Voltage	BC182	$V_{(BR)CBO}$	60	-	V
at I_C = 10 µA	BC183, BC184		45	-	
Collector Emitter Breakdown Voltage	BC182	$V_{(BR)CEO}$	50	-	V
at I_C = 2 mA	BC183, BC184		30	-	
Emitter Base Breakdown Voltage at I_E = 100 µA		$V_{(BR)EBO}$	6	-	V

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 Saturation Voltage at I_C = 100 mA, I_B = 5 mA	$V_{BE(sat)}$	-	1.2	V
Base Emitter On Voltage at V_{CE} = 5 V, I_C = 2 mA	$V_{BE(on)}$	0.55	0.7	V
Current Gain Bandwidth Product at V_{CE} = 5 V, I_C = 10 mA, f = 100 MHz	f_T	150	-	MHz
Collector Base Capacitance at V_{CB} = 10 V, f = 1 MHz	C_{ob}	-	5	pF

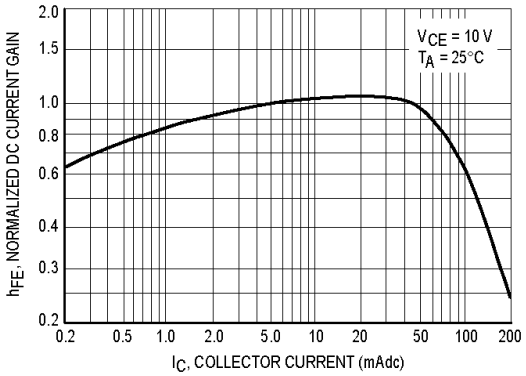


Figure 1. Normalized DC Current Gain

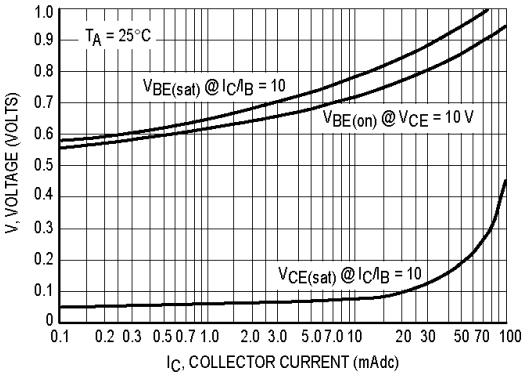


Figure 2. "Saturation" and "On" Voltages

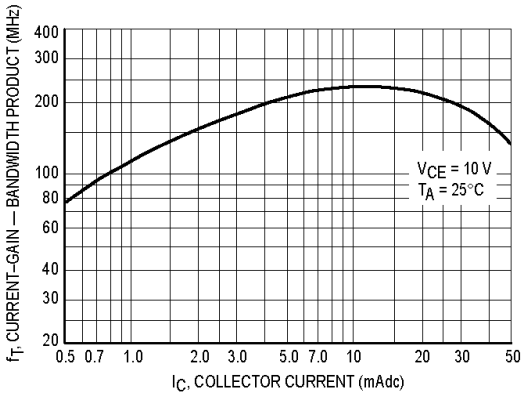


Figure 3. Current–Gain — Bandwidth Product

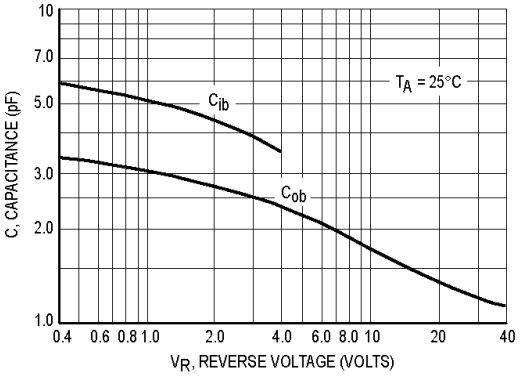


Figure 4. Capacitances