

BC182...BC184

NPN Silicon Epitaxial Planar Transistor

for general purpose amplifier applications



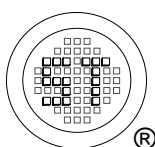
1. Collector 2. Base 3. Emitter
TO-92 Plastic Package

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

Parameter	Symbol	Value	Unit	
Collector Base Voltage	V_{CB0}	BC182	60	V
		BC183, BC184	45	
Collector Emitter Voltage	V_{CEO}	BC182	50	V
		BC183, BC184	30	
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	$^\circ\text{C}$	
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$	

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

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



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Dated : 27/12/2007

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

Parameter	Symbol	Min.	Max.	Unit
Collector Emitter Saturation Voltage at $I_C = 10\text{ mA}$, $I_B = 0.5\text{ mA}$ at $I_C = 100\text{ mA}$, $I_B = 5\text{ mA}$	$V_{CE(sat)}$	-	0.25 0.6	V
Base Emitter Saturation Voltage at $I_C = 100\text{ mA}$, $I_B = 5\text{ mA}$	$V_{BE(sat)}$	-	1.2	V
Base Emitter On Voltage at $V_{CE} = 5\text{ V}$, $I_C = 2\text{ mA}$	$V_{BE(on)}$	0.55	0.7	V
Current Gain Bandwidth Product at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$, $f = 100\text{ MHz}$	f_T	150	-	MHz
Collector Base Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	5	pF

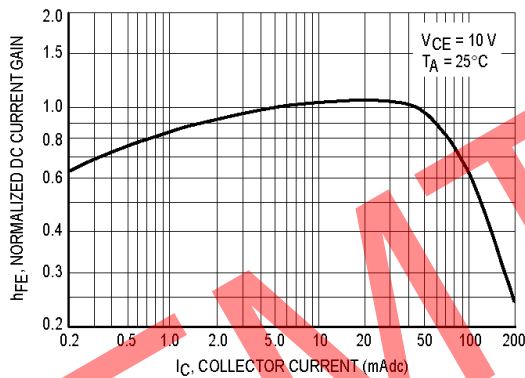


Figure 1. Normalized DC Current Gain

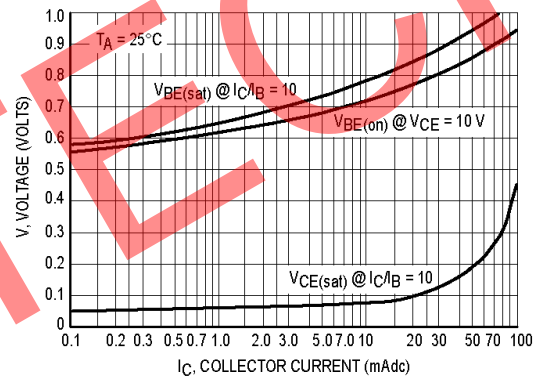


Figure 2. "Saturation" and "On" Voltages

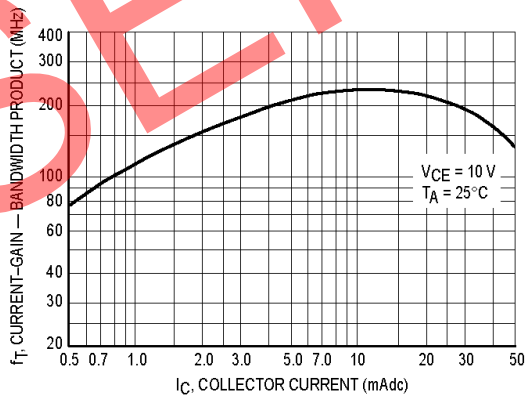


Figure 3. Current-Gain — Bandwidth Product

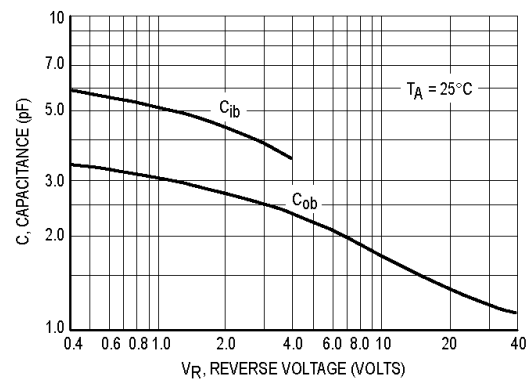
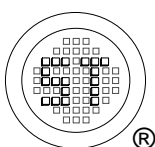


Figure 4. Capacitances



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