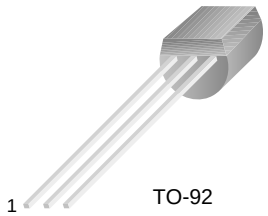
FAIRCHILD SEMICONDUCTOR®

September 2007

BC184
Silicon NPN Small Signal Transistor

- BV_{CEO} = 30V (Min.)
- h_{FE} = 130 (Min.) @V_{CE} = 5.0V, I_C = 100mA



TO-92

1. Collector 2. Base 3. Emitter

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	30	V
V_{CBO}	Collector-Base Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current (DC)	100	mA
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 ~ +150	°C

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

1) These ratings are based on a maximum junction temperature of 150 degrees C.

2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation Derate above 25°C	350 2.8	mW mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	125	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

*Device mounted on FR-4 PCB 1.6” X 1.6” X 0.06”.

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Voltage	I_C = 10μA	45			V
BV_{CEO}	Collector-Emitter Voltage	I_C = 2mA	30			V
BV_{EBO}	Emitter-Base Voltage	I_E = 10μA	5			V
I_{EBO}	Emitter Cut-off Current	V_{EB} = 4V			15	nA
I_{CBO}	Collector Cut-off Current	V_{CB} = 30V			15	nA
h_{FE}	DC Current Gain	V_{CE} = 5V, I_C = 10μA V_{CE} = 5V, I_C = 100mA	100 130			
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 10mA, I_B = 0.5mA I_C = 100mA, I_B = 5mA			0.25 0.6	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = 100mA, I_B = 5mA			1.2	V
V_{BE}(on)	Base-Emitter On Voltage	V_{CE} = 5V, I_C = 2mA	0.55		0.7	V
C_{ob}	Output Capacitance	V_{CE} = 10V, f = 1MHz			5	pF
f_T	Current gain Bandwidth Product	V_{CE} = 5V, I_C = 10mA, f = 100MHz	150			MHz

Notes:
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2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.
3. These ratings are based on a maximum junction temperature of 150degrees C.

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