

# BC182 & BC182B



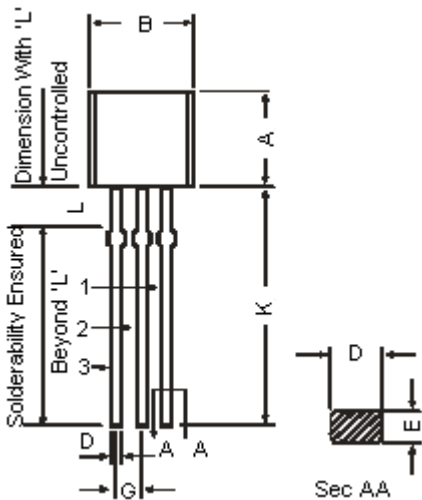
## General Purpose Transistors



### General Description:

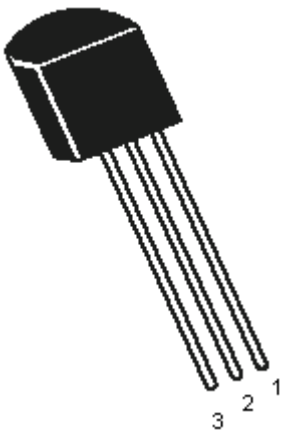
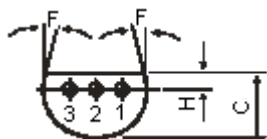
General Purpose NPN Silicon Planar Epitaxial Amplifier Transistors.

### TO-92 Plastic Package



Dimensions	Minimum	Maximum
A	4.32	5.33
B	4.45	5.20
C	3.18	4.19
D	0.41	0.55
E	0.35	0.50
F	5°	
G	1.14	1.40
H		1.53
K	12.70	-
L	1.982	2.082

Dimensions : Millimetres



### Pin Configuration

1. Emitter
2. Base
3. Collector



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

Parameter	Symbol	Value	Units
Collector-Emitter Voltage	$V_{CEO}$	50	V
Collector-Base Voltage	$V_{CBO}$	60	
Emitter-Base Voltage	$V_{EBO}$	6.0	
Collector Current Continuous	$I_C$	100	mA
Power Dissipation at $T_a = 25^\circ\text{C}$ Derate Above $25^\circ\text{C}$	$P_D$	350	mW
		2.8	mW/ $^\circ\text{C}$
Power Dissipation at $T_c = 25^\circ\text{C}$ Derate Above $25^\circ\text{C}$		1.0	W
		8.0	mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	$T_j, T_{stg}$	-55 to +150	$^\circ\text{C}$

### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ unless specified otherwise)

Parameter	Symbol	Test Condition	Minimum	Typical	Maximum	Units
Collector-Emitter Voltage	$V_{CEO}$	$I_C = 2\text{mA}, I_B = 0$	50	-	-	V
Collector-Base Voltage	$V_{CBO}$	$I_C = 10\mu\text{A}, I_E = 0$	60	-	-	
Emitter-Base Voltage	$V_{EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	6.0	-	-	
Collector-Cutoff Current	$I_{CBO}$	$V_{CB} = 50\text{V}, I_E = 0$	-	0.2	15	nA
Emitter-Cutoff Current	$I_{EBO}$	$V_{EB} = 4\text{V}, I_C = 0$	-	-		
DC Current Gain	$h_{FE}$	$I_C = 2\text{mA}, V_{CE} = 5\text{V}$ $I_C = 100\text{mA}, V_{CE} = 5\text{V}$	120 80	-	500	-
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}, I_B = 0.5\text{mA}$ $I_C = 100\text{mA}, I_B = 5\text{mA}^*$	-	0.07 0.2	0.25 0.6	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 100\text{mA}, I_B = 5\text{mA}^*$	-	-	1.2	
Base Emitter On Voltage	$V_{BE(on)}$	$I_C = 100\mu\text{A}, V_{CE} = 5\text{V}$ $I_C = 2\text{mA}, V_{CE} = 5\text{V}$ $I_C = 100\text{mA}, V_{CE} = 5\text{V}^*$	0.55	0.5 0.62 0.83	0.7	

\*Pulse Condition:  $\tau_P 300\text{s}$ , Duty Cycle = 2.0%

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### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ unless specified otherwise)

Parameter	Symbol	Test Condition	Minimum	Typical	Maximum	Units
<b>Dynamic Characteristics</b>						
Current Gain Bandwidth Product	$f_T$	$I_C = 0.5\text{mA}$ , $V_{CE} = 3\text{V}$ $f = 100\text{MHz}$ $I_C = 10\text{mA}$ , $V_{CE} = 5\text{V}$ $f = 100\text{MHz}$	- 150	100 200	-	MHz
Out-Put Capacitance	$C_{ob}$	$V_{CB} = 10\text{V}$ , $I_C = 0$ $f = 1\text{MHz}$	-	-	5.0	pF
Input Capacitance	$C_{ib}$	$V_{BE} = 0.5\text{V}$ , $I_C = 0$ $f = 1\text{MHz}$	-	8.0	-	pF
Small Signal Current Gain	BC182 BC182B	$ h_{fe} $	$I_C = 2\text{mA}$ , $V_{CE} = 5\text{V}$ $f = 1\text{kHz}$	125 240	- 500 500	-
Noise Figure	NF	$I_C = 2\text{mA}$ , $V_{CE} = 5\text{V}$ $R_s = 2\text{k}\Omega$ , $f = 1\text{kHz}$ $F = 200\text{Hz}$	-	-	10	dB

### Specifications

$V_{CEO}$ (V)	$V_{CBO}$ maximum (V)	$I_C$ (A)	$h_{FE}$ minimum at $I_C = 2\text{mA}$	$f_T$ minimum (MHz)	$P_{tot}$ (mW)	Package	Part Number
50	60	0.1	120	150	350	TO-92	BC182
							BC182B

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## General Purpose Transistors



### Notes:

### International Sales Offices:



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