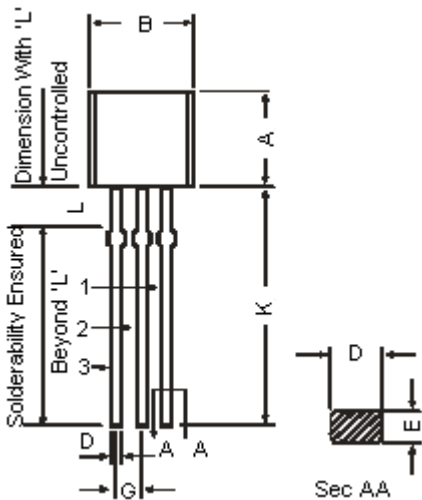# BC182 & BC182B

General Purpose Transistors

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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
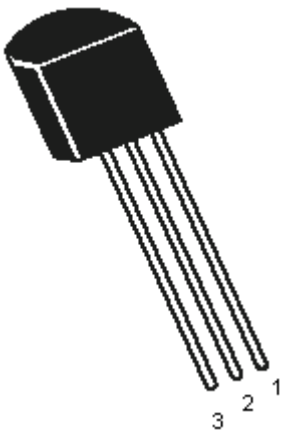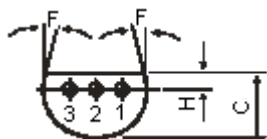
Pin Configuration
1. Emitter
2. Base
3. Collector

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Absolute Maximum Ratings (T_a = 25°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°C Derate Above 25°C	P_D	350 2.8	mW mW/°C
Power Dissipation at T_c = 25°C Derate Above 25°C		1.0 8.0	W mW/°C
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-55 to +150	°C

Electrical Characteristics (T_a = 25°C unless specified otherwise)

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

*Pulse Condition: =T_P300s, Duty Cycle = 2.0%

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Electrical Characteristics (T_a = 25°C unless specified otherwise)

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

Specifications

V_{CEO} (V)	V_{CBO} maximum (V)	I_C (A)	h_{FE} minimum at I_C = 2mA	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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BC182 & BC182B

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Notes:

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