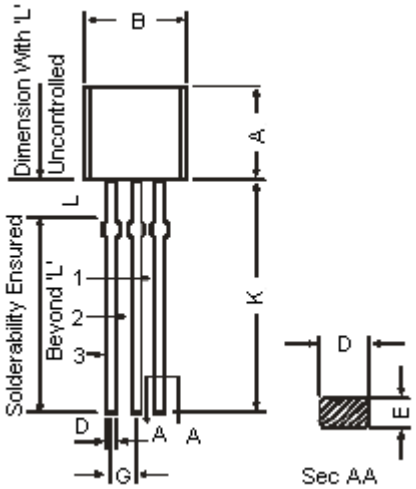
BC182B

Bipolar Transistors

Description:

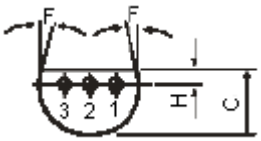
General Purpose NPN Silicon Planar Epitaxial Amplifier Transistors.

TO-92 Plastic Package



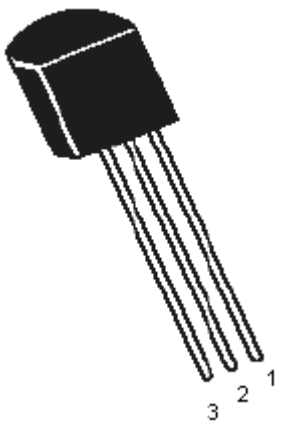
Dimensions	Minimum	Maximum
A	4.32	5.33
B	4.45	5.20
C	3.18	4.19
D	0.41	0.55
E	0.35	0.50
F	5°	
G	1.14	1.40
H		1.53
K	12.70	-
L	1.982	2.082

Dimensions : Millimetres



Pin Configuration:

1. Emitter
2. Base
3. Collector



Absolute Maximum Ratings (T_a = 25°C unless specified otherwise)

Description	Symbol	Value	Unit
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)

Description	Symbol	Test Condition	Minimum	Typical	Maximum	Unit
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-Cut off Current	I_{CBO}	V_{CB} = 50V, I_E = 0	-	0.2	15	nA
Emitter-Cut off Current	I_{EB0}	V_{EB} = 4V, I_C = 0	-	-		
DC Current Gain	h_{FE}	I_C = 10µA, V_{CE} = 5V	40	-	500	-
		I_C = 2mA, V_{CE} = 5V	120	-		-
		I_C = 100mA, V_{CE} = 5V	80	-		-
Collector Emitter Saturation Voltage	$V_{CE\ (sat)}$	I_C = 10mA, I_B = 0.5mA I_C = 100mA, I_B = 5.0mA*	-	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 = 2.0mA, V_{CE} = 5V I_C = 100mA, V_{CE} = 5V*	0.55	0.5 0.62 0.83	0.7	

*Pulse Condition: T_P = 300s, Duty Cycle = 2.0%.

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

Description	Symbol	Test Condition	Minimum	Typical	Maximum	Unit
Dynamic Characteristics						
Current Gain Bandwidth Product	f_T	I_C = 0.5mA, V_{CE} = 3V f = 100MHz I_C = 10mA, V_{CE} = 5.0V f = 100MHz	- 150	100 200	- -	MHz
Output 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		
Small Signal Current Gain	$\|h_{fe}\|$	I_C = 2mA, V_{CE} = 5V f = 1KHz	125 125 240	-	500 260 500	-
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	120	350	TO-92	BC182B

BC182B

Bipolar Transistors

Notes:

International Sales Offices:

AUSTRALIA – Farnell
Tel No: ++61 1300 361 005
Fax No: ++61 1300 361 225

FINLAND – Farnell
Tel No: ++ 358 9 560 7780
Fax No: ++ 358 9 345 5411

ITALY – Farnell
Tel No: ++ 39 02 93 995 200
Fax No: ++ 39 02 93 995 300

SPAIN – Farnell
Tel No: 901 20 20 80
Fax No: 901 20 20 90

AUSTRIA – Farnell
Tel No: ++ 43 662 2180 680
Fax No: ++ 43 662 2180 670

FRANCE – Farnell
Tel No: ++ 33 474 68 99 99
Fax No: ++ 33 474 68 99 90

MALAYSIA – Farnell-Newark
Tel No: ++ 60 3 7873 8000
Fax No: ++ 60 3 7873 7000

SWEDEN – Farnell
Tel No: ++ 46 8 730 50 00
Fax No: ++ 46 8 83 52 62

BELGIUM – Farnell
Tel No: ++ 32 3 475 2810
Fax No: ++ 32 3 227 3648

GERMANY – Farnell
Tel No: ++ 49 89 61 39 39 39
Fax No: ++ 49 89 613 59 01

NETHERLANDS – Farnell
Tel No: ++ 31 30 241 7373
Fax No: ++ 31 30 241 7333

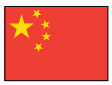
SWITZERLAND – Farnell
Tel No: ++ 44 204 64 64
Fax No: ++ 44 204 64 54

BRAZIL – Farnell-Newark
Tel No: ++ 55 11 4066 9400
Fax No: ++ 55 11 4066 9410

HONG KONG – Farnell-Newark
Tel No: ++ 852 2268 9888
Fax No: ++ 852 2268 9899

NEW ZEALAND – Farnell
Tel No: 0800 90 80 80
Fax No: 0800 90 80 81

UK – Farnell
Tel No: ++ 44 8701 200 200
Fax No: ++ 44 8701 200 201

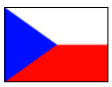


CHINA – Farnell-Newark
Tel No: ++86 10 6238 5152
Fax No: ++86 10 6238 5022

HUNGARY - Farnell
Tel No: ++ 44 870 1200 208
Fax No: ++ 44 870 1200 209

NORWAY – Farnell
Tel No: 800 146 70
Fax No: 800 146 76

UK – CPC
++ 44 8701 202 530
++ 44 8701 202 531



CZECH REPUBLIC - Farnell
Tel No: ++ 44 870 1200 208
Fax No: ++ 44 870 1200 209

INDIA - Farnell
Tel No: ++ 44 870 1200 208
Fax No: ++ 44 870 1200 209

PORTUGAL – Farnell
Tel No: ++ 34 93 475 8804
Fax No: ++ 34 93 474 5288

USA – Newark
Tel No: 800 463 9275

DENMARK – Farnell
Tel No: ++ 45 44 53 66 44
Fax No: ++ 45 44 53 66 06

IRELAND – Farnell
Tel No: ++ 353 1 830 9277
Fax No: ++ 353 1 830 9016

RUSSIA – Farnell
Tel No: ++ 44 870 1200 208
Fax No: ++ 44 870 1200 209

export

EXPORT – Farnell
Tel No: ++ 44 8701 200 208
Fax No: ++ 44 8701 200 209

For enquiries from all other markets

ESTONIA – Farnell
Tel No: ++ 358 9 560 7780
Fax No: ++ 358 9 345 5411

ISRAEL – Farnell
Tel No: ++ 180 937 0015
Fax No: ++ 180 937 0014

SINGAPORE – Farnell-Newark
Tel No: ++ 65 6788 0200
Fax No: ++ 65 6788 0300

http://www.farnell.com
http://www.newark.com
http://www.cpc.co.uk