

BC184B
SILICON
NPN TRANSISTOR



TO-92 CASE

DESCRIPTION:

The CENTRAL SEMICONDUCTOR BC184B is a silicon NPN transistor designed for low level, low noise amplifier applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL		UNITS
V_{CBO}	45	V
V_{CEO}	30	V
V_{EBO}	6.0	V
I_C	200	mA
P_D	300	mW
T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
θ_{JA}	417	$^\circ\text{C/W}$

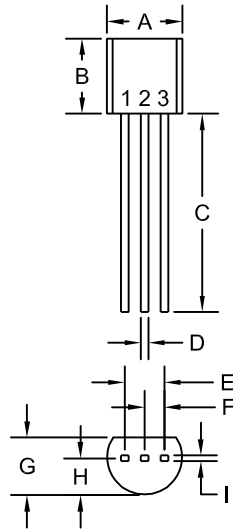
ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CBO}	$V_{CB}=30\text{V}$			15	nA
I_{EBO}	$V_{EB}=4.0\text{V}$			15	nA
BV_{CBO}	$I_C=10\mu\text{A}$	45			V
BV_{CEO}	$I_C=2.0\text{mA}$	30			V
BV_{EBO}	$I_E=10\mu\text{A}$	6.0			V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=0.5\text{mA}$			0.25	V
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=5.0\text{mA}$			0.6	V
$V_{BE(SAT)}$	$I_C=100\text{mA}, I_B=5.0\text{mA}$			1.2	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=10\mu\text{A}$		0.52		V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=100\mu\text{A}$		0.55		V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=2.0\text{mA}$	0.55		0.7	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$		0.68		V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\mu\text{A}$	100			
h_{FE}	$V_{CE}=5.0\text{V}, I_C=2.0\text{mA}$	250			
h_{FE}	$V_{CE}=5.0\text{V}, I_C=100\text{mA}$	130			
h_{fe}	$V_{CE}=5.0\text{V}, I_C=2.0\text{mA}, f=1.0\text{kHz}$	240		500	
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		3.0	5.0	pF
C_{ib}	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		9.5		pF
f_T	$V_{CE}=5.0\text{V}, I_C=10\text{mA}, f=100\text{MHz}$		280		MHz
NF	$V_{CE}=5.0\text{V}, I_C=200\mu\text{A}, R_G=2.0\text{k}\Omega, f=10\text{Hz to } 10\text{kHz}$			4.0	dB

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TO-92 CASE - MECHANICAL OUTLINE



R1

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

LEAD CODE:

- 1) Collector
- 2) Base
- 3) Emitter

MARKING: FULL PART NUMBER

R0 (11-October 2016)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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