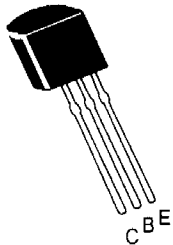


New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
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TELEPHONE: (973) 376-2922
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NPN SILICON PLANAR EPITAXIAL TRANSISTORS



BC182, A, B
BC183, A, B, C
BC184, B, C

TO-92
Plastic Package
For Lead Free Parts, Device
Part # will be Prefixed with
"T"

Amplifier Transistors

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

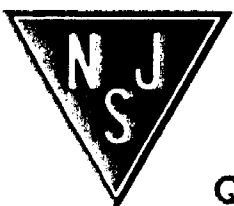
DESCRIPTION	SYMBOL	BC182	BC183	BC184	UNITS
Collector Emitter Voltage	V_{CEO}	50	30	30	V
Collector Base Voltage	V_{CBO}	60	45	45	V
Emitter Base Voltage	V_{EBO}	6.0			V
Collector Current Continuous	I_C	100			mA
Power Dissipation at $T_a=25^\circ\text{C}$	P_D	350			mW
Derate Above 25°C		2.8			mW/ $^\circ\text{C}$
Power Dissipation at $T_c=25^\circ\text{C}$	P_D	1.0			W
Derate Above 25°C		8.0			mW/ $^\circ\text{C}$
Operating And Storage Junction Temperature Range	T_j, T_{stg}	- 55 to +150			$^\circ\text{C}$

THERMAL RESISTANCE

Junction to Case	$R_{th(j-c)}$	125	$^\circ\text{C/W}$
Junction to Ambient in free air	$R_{th(j-a)}$	357	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Emitter Voltage	V_{CEO}	$I_C=2\text{mA}, I_B=0$				
		BC182	50			V
		BC183/BC184	30			V
Collector Base Voltage	V_{CBO}	$I_C=10\mu\text{A}, I_E=0$				
		BC182	60			V
		BC183/BC184	45			V
Emitter Base Voltage	V_{EBO}	$I_E=100\mu\text{A}, I_C=0$	6.0			V
Collector Cut Off Current	I_{CBO}	$V_{CB}=50\text{V}, I_E=0$ BC182			15	nA
		$V_{CB}=30\text{V}, I_E=0$ BC183/184			15	nA
Emitter Cut Off Current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			15	nA



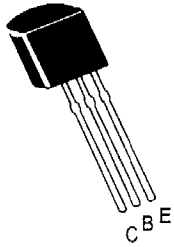
Quality Semi-Conductors

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BC182, A, B
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ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
DC Current Gain	h_{FE}	$I_C=10\mu\text{A}, V_{CE}=5\text{V}$				
		BC182/183	40			
		BC184	100			
		$I_C=2\text{mA}, V_{CE}=5\text{V}$				
		BC182	120		500	
		BC183	120		800	
		$I_C=100\text{mA}, V_{CE}=5\text{V}$				
		BC182	80			
		BC183	80			
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=0.5\text{mA}$			0.25	V
		* $I_C=100\text{mA}, I_B=5\text{mA}$			0.60	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	* $I_C=100\text{mA}, I_B=5\text{mA}$			1.2	V
Base Emitter On Voltage	$V_{BE(on)}$	$I_C=100\mu\text{A}, V_{CE}=5\text{V}$		0.50		V
		$I_C=2\text{mA}, V_{CE}=5\text{V}$	0.55		0.70	V
		$I_C=100\text{mA}, V_{CE}=5\text{V}$		0.83		V

SMALL SIGNAL CHARACTERISTICS

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS		
Transistors Frequency	f_T	$I_C=0.5\text{mA}, V_{CE}=3\text{V}, f=100\text{MHz}$						
		BC182		100		MHz		
		BC183		120		MHz		
		BC184		140		MHz		
		$I_C=10\text{mA}, V_{CE}=5\text{V}, f=100\text{MHz}$	150			MHz		
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			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	h_{fe}	$I_C=2\text{mA}, V_{CE}=5\text{V}, f=1\text{KHz}$						
		BC182	125		500			
		BC183	125		900			
		BC184	240		900			
		BC182A/BC183A	125		260			
		BC182B/183B/184B	240		500			
		BC183C/184C	450		900			
		Noise Figure	NF	$I_C=0.2\text{mA}, V_{CE}=5\text{V}, R_S=2\text{k}\Omega,$ $f=30\text{Hz to }15\text{KHz}$			4.0	dB
				BC184				
		$I_C=0.2\text{mA}, V_{CE}=5\text{V}, R_S=2\text{k}\Omega,$ $f=1\text{kHz}, F=200\text{Hz}$			10	dB		
		BC182/BC183			4.0	dB		
		BC184						

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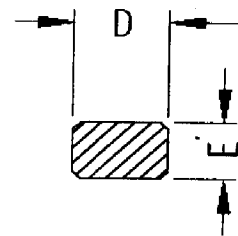
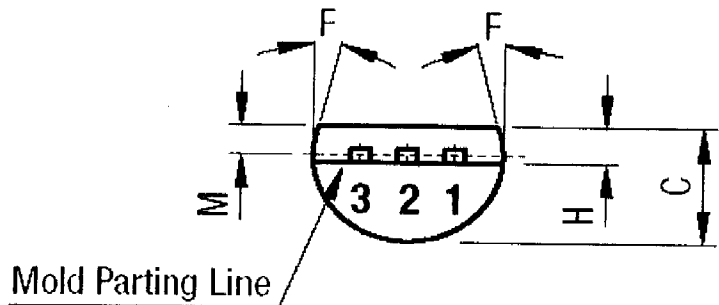
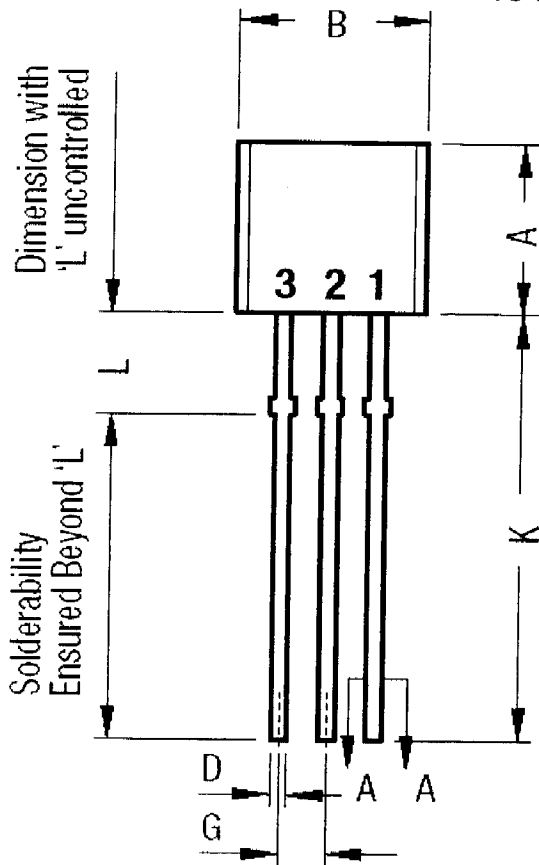
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BC184, B, C

TO-92
Plastic Package

For Lead Free Parts, Device Part #
 will be Prefixed with "T"

TO-92 Leaded Plastic Package



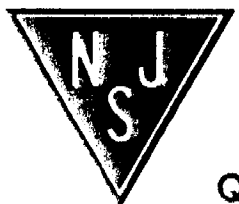
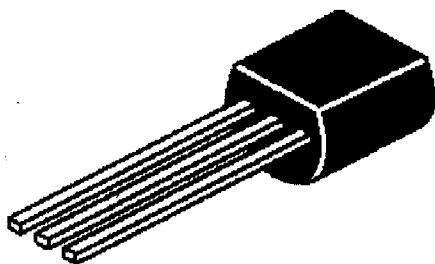
SEC AA

DIM	Min	Max
A	4.32	5.33
B	4.45	5.20
C	3.18	4.19
D	0.40	0.55
E	0.30	0.55
F	5°	

All Dimensions are in mm

DIM	Min	Max
G	1.14	1.40
H	1.20	1.80
K	12.5	
L	1.982	2.082
M	1.03	1.53

Pin 1 Emitter
 Pin 2 Base
 Pin 3 Collector



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