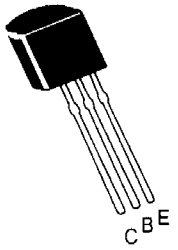
New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

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

THERMAL RESISTANCE

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

ELECTRICAL CHARACTERISTICS (T_a=25°C unless specified otherwise)

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

Quality Semi-Conductors

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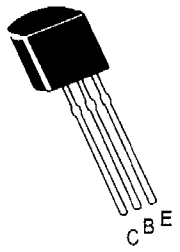
NPN SILICON PLANAR EPITAXIAL TRANSISTORS



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

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ELECTRICAL CHARACTERISTICS (T_a=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
DC Current Gain	h_{FE}	I_C=10μA, V_{CE}=5V				
		BC182/183	40			
		BC184	100			
		I_C=2mA, V_{CE}=5V				
		BC182	120		500	
		BC183	120		800	
		BC184	240		800	
		I_C=100mA, V_{CE}=5V				
		BC182	80			
		BC183	80			
		BC184	130			
Collector Emitter Saturation Voltage	$V_{CE\ (sat)}$	I_C=10mA, I_B=0.5mA			0.25	V
		*I_C=100mA, I_B=5mA			0.60	V
Base Emitter Saturation Voltage	$V_{BE\ (sat)}$	*I_C=100mA, I_B=5mA			1.2	V
Base Emitter On Voltage	$V_{BE\ (on)}$	I_C=100μA, V_{CE}=5V		0.50		V
		I_C=2mA, V_{CE}=5V	0.55		0.70	V
		I_C=100mA, V_{CE}=5V		0.83		V

SMALL SIGNAL CHARACTERISTICS

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Transistors Frequency	f_T	I_C=0.5mA, V_{CE}=3V, f=100MHz				
		BC182		100		MHz
		BC183		120		MHz
		BC184		140		MHz
		I_C=10mA, V_{CE}=5V, f=100MHz	150			MHz
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=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	h_{fe}	I_C=2mA, V_{CE}=5V, f=1KHz				
		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=0.2mA, V_{CE}=5V, R_S=2 kΩ, f=30Hz to 15KHz				
		BC184			4.0	dB
		I_C=0.2mA, V_{CE}=5V, R_S=2 kΩ, f=1kHz, F=200Hz				
		BC182/BC183			10	dB
		BC184			4.0	dB

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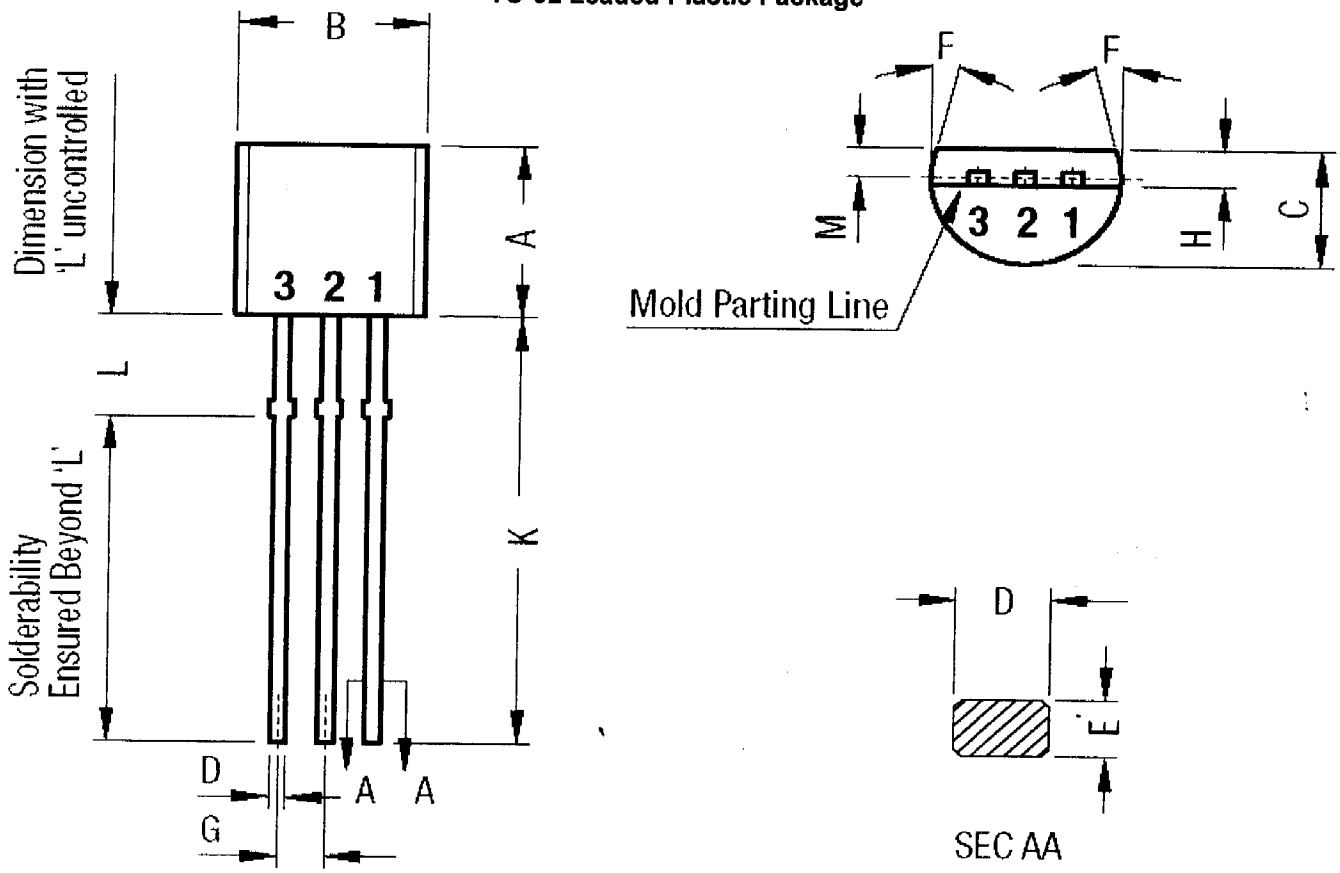
TO-92 Leaded Plastic Package

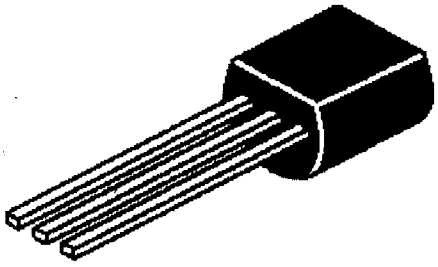


DIM	Min	Max
A	4.32	5.33
B	4.45	5.20
C	3.18	4.19
D	0.40	0.55
E	0.30	0.55
F	5°	

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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