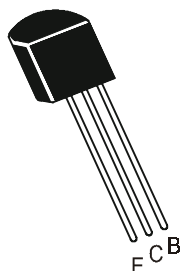


NPN SILICON PLANAR EPITAXIAL AMPLIFIER TRANSISTORS

**BC184L, BC184LB
BC184LC**



**TO-92
Plastic Package**

General Purpose Amplifier Transistors

ABSOLUTE MAXIMUM RATINGS(Ta=25°C unless specified otherwise)

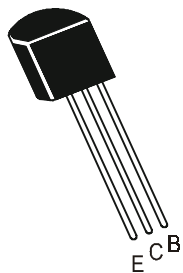
DESCRIPTION	SYMBOL	VALUE	UNITS
Collector -Emitter Voltage	V_{CEO}	30	V
Collector -Base Voltage	V_{CBO}	45	V
Emitter -Base Voltage	V_{EBO}	6.0	V
Collector Current Continuous	I_C	100	mA
Power Dissipation @ Ta=25°C	P_D	350	mW
Derate Above 25°C		2.8	mW/°C
Power Dissipation @ Tc=25°C	P_D	1.0	W
Derate Above 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	$R_{th(j-a)}$	357	°C/W

ELECTRICAL CHARACTERISTICS (Ta=25°C Unless Specified Otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector -Emitter Voltage	V_{CEO}	$I_C=2mA, I_B=0$	30			V
Collector -Base Voltage	V_{CBO}	$I_C=10\mu A, I_E=0$	45			V
Emitter-Base Voltage	V_{EBO}	$I_E=100\mu A, I_C=0$	6			V
Collector-Cut off Current	I_{CBO}	$V_{CB}=30V, I_E=0$		0.2	15	nA
Emitter-Cut off Current	I_{EBO}	$V_{EB}=4V, I_C=0$			15	nA
DC Current Gain	h_{FE}	$I_C=10\mu A, V_{CE}=5V$	100			
		$I_C=2mA, V_{CE}=5V$	240		800	
		$I_C=100mA, V_{CE}=5V$	130			

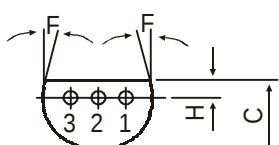
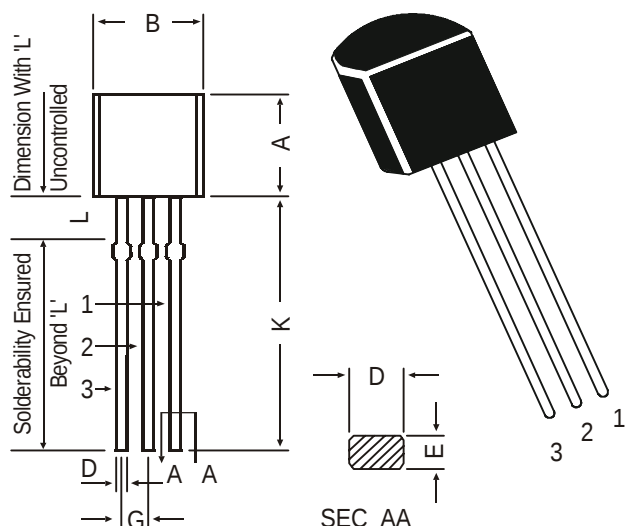
**ELECTRICAL CHARACTERISTICS (Ta=25°C Unless Specified Otherwise)**

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Emitter Saturation Voltage	$V_{CE(Sat)}$	$I_C=10mA, I_B=0.5mA$		0.07	0.25	V
		$I_C=100mA, I_B=5.0mA^*$		0.2	0.6	V
Base Emitter Saturation Voltage	$V_{BE(Sat)}$	$I_C=100mA, I_B=5mA^*$			1.2	V
Base Emitter On Voltage	$V_{BE(On)}$	$I_C=2.0mA, V_{CE}=5V$	0.55	0.62	0.7	V
		$I_C=100\mu A, V_{CE}=5V$		0.5		V
		$I_C=100mA, V_{CE}=5V^*$		0.83		V
Transistors Frequency	f_T	$I_C=0.5mA, V_{CE}=3V$		140		MHz
		$f=100MHz$				
		$I_C=10mA, V_{CE}=5V$	150	280		MHz
Common Base OutPut Capacitance	C_{ob}	$V_{CB}=10V, I_C=0$			5.0	pF
		$f=1MHz$				
Input Capacitance	C_{ib}	$V_{BE}=0.5V, I_C=0$		8.0		pF
Small Signal Current Gain	BC184L	$ h_{fe} $ $I_C=2mA, V_{CE}=5V$ $f = 1kHz$	240		900	
			240		500	
			450		900	
Noise Figure		$I_C=0.2mA, V_{CE}=5.0V$ $R_s=2kW, f=30Hz$ to 15kHz			4	dB
		$I_C=0.2mA, V_{CE}=5.0V$ $R_s=2kW, f=1kHz$ to F=200Hz			4	dB

*Pulse Condition: =300us, Duty Cycle=2%

TO-92 Plastic Package

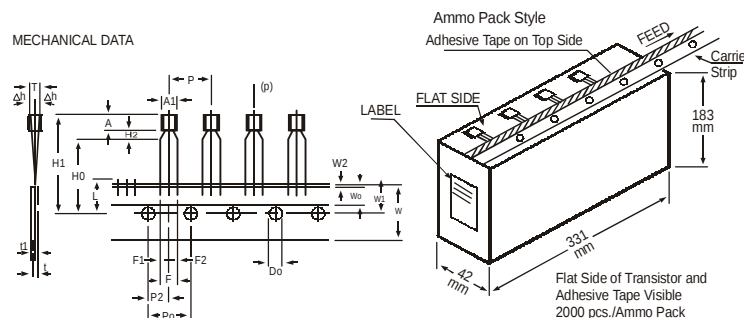
TO-92 Transistors on Tape and Ammo Pack



PIN CONFIGURATION
1. BASE
2. COLLECTOR
3. EMITTER

DIM	MIN.	MAX.
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 DEG	
G	1.14	1.40
H	1.14	1.53
K	12.70	—
L	1.982	2.082

All dimensions in mm.



All dimensions in mm unless specified otherwise

ITEM	SYMBOL	SPECIFICATION				REMARKS
		MIN.	NOM.	MAX.	TOL.	
BODY WIDTH	A1	4.0		4.8		
BODY HEIGHT	A	4.8		5.2		
BODY THICKNESS	T	3.9		4.2		
PITCH OF COMPONENT	P		12.7		±1	
FEED HOLE PITCH	Po		12.7		±0.3	
FEED HOLE CENTRE TO COMPONENT CENTRE	P2		6.35		±0.4	
DISTANCE BETWEEN OUTER LEADS	F		5.08		+0.6 -0.2	
COMPONENT ALIGNMENT	Δh		0	1		AT TOP OF BODY
TAPE WIDTH	W		18		±0.5	
HOLD-DOWN TAPE WIDTH	Wo		6		±0.2	
HOLE POSITION	W1		9		+0.7 -0.5	
HOLD-DOWN TAPE POSITION	W2		0.5		±0.2	
LEAD WIRE CLINCH HEIGHT	Ho		16		±0.5	
COMPONENT HEIGHT	H1			23.25		
LENGTH OF SNIPPED LEADS	L			11.0		
FEED HOLE DIAMETER	Do		4		±0.2	
TOTAL TAPE THICKNESS	t			1.2		±1 0.3 - 0.6
LEAD - TO - LEAD DISTANCE F1,	F2		2.54		+0.4 -0.1	
CLINCH HEIGHT	H2			3		
PULL - OUT FORCE	(P)	6N				

NOTES

1. MAXIMUM ALIGNMENT DEVIATION BETWEEN LEADS NOT TO BE GREATER THAN 0.2 mm.
2. MAXIMUM NON-CUMULATIVE VARIATION BETWEEN TAPE FEED HOLES SHALL NOT EXCEED 1 mm IN 20 PITCHES.
3. HOLDDOWN TAPE NOT TO EXCEED BEYOND THE EDGE(S) OF CARRIER TAPE AND THERE SHALL BE NO EXPOSURE OF ADHESIVE.
4. NO MORE THAN 3 CONSECUTIVE MISSING COMPONENTS ARE PERMITTED.
5. A TAPE TRAILER, HAVING AT LEAST THREE FEED HOLES ARE REQUIRED AFTER THE LAST COMPONENT.
6. SPLICES SHALL NOT INTERFERE WITH THE SPROCKET FEED HOLES.

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-92 Bulk	1K/polybag	200 gm/1K pcs	3" x 7.5" x 7.5"	5K	17" x 15" x 13.5"	80K	23 kgs
TO-92 T&A	2K/ammo box	645 gm/2K pcs	12.5" x 8" x 1.8"	2K	17" x 15" x 13.5"	32K	12.5 kgs

Disclaimer

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