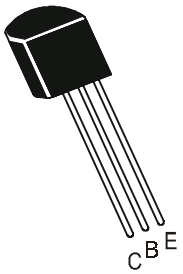
PNP SILICON PLANAR EPITAXIAL TRANSISTORS

BC 446, A, B
BC 448, A, B
BC 450, A, B



TO-92
Plastic Package

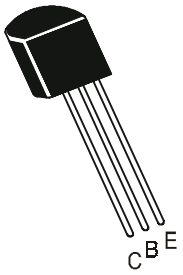
General Purpose High Voltage Transistors.

ABSOLUTE MAXIMUM RATINGS (Ta=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Emitter Voltage	V_{CEO}		60	80	100	V
Collector Base Voltage	V_{CBO}		60	80	100	V
Emitter Base Voltage	V_{EBO}		5	5	5	V
Collector Current Continuous	I_C		300			mA
Total Device Dissipation@ Ta=25ºC	P_D			625		mW
Derate Above 25ºC				5		mW/ ºC
Total Device Dissipation@ Tc=25ºC	P_D			1.5		W
Derate Above 25ºC				12		mW/ ºC
Operating And Storage Junction Temperature Range	T_j, T_{stg}			-55 to +150		ºC
THERMAL RESISTANCE						
Junction to ambient	$R_{th(j-a)}$			200		ºC/W
Junction to case	$R_{th(j-c)}$			83.3		ºC/W

SILICON PLANAR EPITAXIAL TRANSISTORS

BC 446, A, B
BC 448, A, B
BC 450, A, B



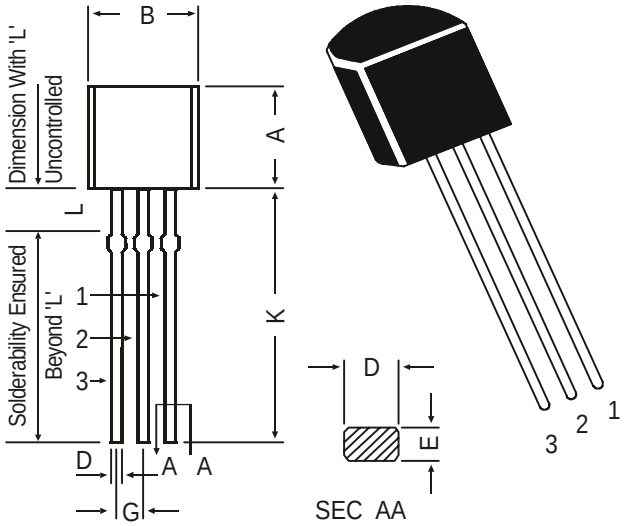
TO-92
Plastic Package

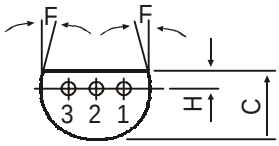
ELECTRICAL CHARACTERISTICS (Ta=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Emitter BreakdownVoltage	BV_{CEO} *	I_C=1mA,I_B=0				
BC446			60			V
BC448			80			V
BC450			100			V
Collector Base Breakdown Voltage	BV_{CBO}	I_C=100uA, I_E =0				
BC446			60			V
BC448			80			V
BC450			100			V
Emitter Base Breakdown Voltage	BV_{EBO}	I_E=10uA, I_C=0	5			V
Collector-Cut off Current	I_{CBO}					
BC446		V_{CB} =40V, I_E =0			100	nA
BC448		V_{CB} =60V, I_E =0			100	nA
BC450		V_{CB} =80V, I_E =0			100	nA
DC Current Gain	h_{FE}*					
NON SUFFIX		I_C=2mA,V_{CE}=5V	50		460	
A			120		220	
B			180		460	
NON SUFFIX		I_C=2mA,V_{CE}=5V	50			
A			100			
B			160			
NON SUFFIX		I_C=100mA,V_{CE}=5V	50			
A			60			
B			90			
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=100mA,I_B=10mA			0.25	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=100mA,I_B=10mA		0.85		V
Base Emitter On Voltage	$V_{BE(on)}$	I_C=2mA,V_{CE} =5V	0.55		0.70	V
		I_C=100mA,V_{CE} =5V*			1.2	V
DYNAMICS CHARACTERISTICS						
Transition Frequency	f_T	I_C=50mA, V_{CE}=5V f=100MHz	100			MHz

Pulse Test : Pulse width ≤ 300µs, Duty Cycle ≤2%.

TO-92 Plastic Package



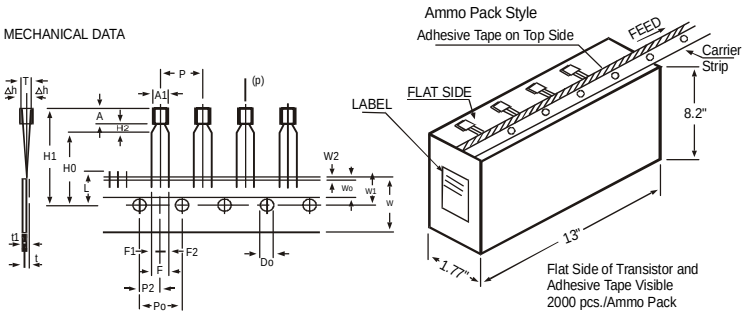


PIN CONFIGURATION
1. EMITTER
2. BASE
3. COLLECTOR

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 diminsions in mm.

TO-92 Transistors on Tape and Ammo Pack



All dimensions in mm unless specified otherwise

ITEM	SYMBOL	SPECIFICATION MIN.	NOM.	MAX.	TOL .	REMARKS
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	CUMULATIVE PITCH ERROR 1.0 mm/20 PITCH
FEED HOLE CENTRE TO COMPONENT CENTRE	P2		6.35		±0.4	TO BE MEASURED AT BOTTOM OF CLINCH
DISTANCE BETWEEN OUTER LEADS	F		5.08		+0.6 -0.2	
COMPONENT ALIGNMENT	△h		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		t1 0.3 - 0.6
LEAD - TO - LEAD DISTANCEF1,	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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