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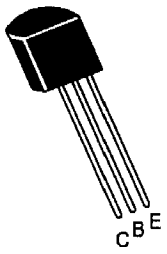
PNP SILICON PLANAR EPITAXIAL TRANSISTORS

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



TO-92
Plastic Package

General Purpose High Voltage Transistors.

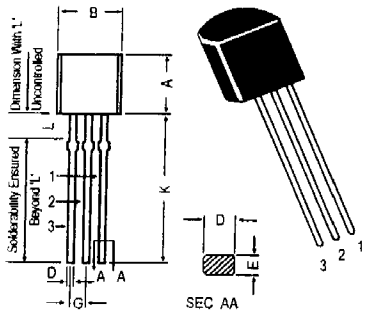
ABSOLUTE MAXIMUM RATINGS (Ta=25°C unless specified otherwise)

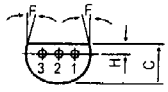
DESCRIPTION	SYMBOL TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Emitter Voltage	V_{CEO}	60	80	100	V
Collector Base Voltage	V_{CBO}	60	80	100	V
Emitter Base Voltage	V_{EBO}	5	5	5	V
Collector Current Continuous	I_C	300			mA
Total Device Dissipation@ Ta=25°C	P_D		625		mW
Derate Above 25°C			5		mW/ °C
Total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

ELECTRICAL CHARACTERISTICS (Ta=25°C 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%.





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.

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	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		-0.8 -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		t1 0.3 - 0.6
LEAD - TO - LEAD DISTANCE	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.