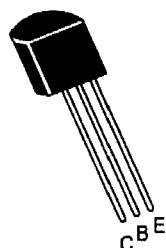


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PNP SILICON PLANAR EPITAXIAL TRANSISTORS



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

TO-92
Plastic Package

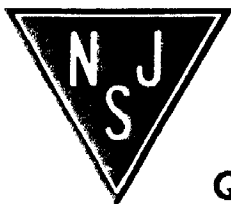
General Purpose High Voltage Transistors.

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



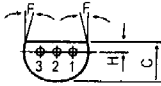
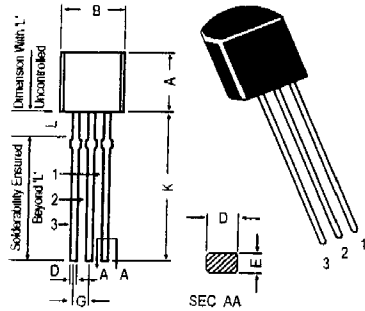
NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

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

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Emitter Breakdown Voltage	BV_{CEO} *	$I_C=1mA, I_B=0$				
BC446			60			V
BC448			80			V
BC450			100			V
Collector Base Breakdown Voltage	BV_{CBO}	$I_C=100\mu A, I_E=0$				
BC446			60			V
BC448			80			V
BC450			100			V
Emitter Base Breakdown Voltage	BV_{EBO}	$I_E=10\mu A, I_C=0$	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 $\leq 300\mu s$, Duty Cycle $\leq 2\%$.



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 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	3.8		4.2	
PITCH OF COMPONENT	P	12.7		±0.3	CUMULATIVE PITCH ERROR 1.0 mm/20 PITCH
FEED HOLE PITCH	P ₀	12.7		±0.3	
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	AT TOP OF BODY
COMPONENT ALIGNMENT	Δh	0	1	-0.2	
TAPE WIDTH	W	18		±0.5	
HOLD-DOWN TAPE WIDTH	W ₀	6		±0.2	
HOLE POSITION	W1	9		+0.7	
				-0.5	
HOLD-DOWN TAPE POSITION	W2	0.5		±0.2	
LEAD WIRE CLINCH HEIGHT	H ₀	18		±0.5	
COMPONENT HEIGHT	H1		23.25		
LENGTH OF SHIPPED LEADS	L		11.0		
FEED HOLE DIAMETER	D ₀	4		±0.2	
TOTAL TAPE THICKNESS	I	2.54	12		11 0.3-0.6
LEAD-TO-LEAD DISTANCE ¹	F2			-0.4	
CLINCH HEIGHT	H2		3		-0.1
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. HOLD-DOWN 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, IS REQUIRED AFTER THE LAST COMPONENT.
6. SPLICES SHALL NOT INTERFERE WITH THE SPROCKET FEED HOLES.