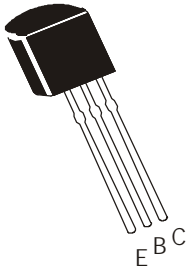


**SILICON PLANAR EPITAXIAL TRANSISTORS**

**CN8050 NPN**

**CN8550 PNP**



**TO-92**

**Plastic Package**

**ABSOLUTE MAXIMUM RATINGS**

DESCRIPTION	SYMBOL	VALUE	UNITS
Collector Emitter Voltage	$V_{CEO}$	25	V
Collector Base Voltage	$V_{CBO}$	40	V
Emitter Base Voltage	$V_{EBO}$	6.0	V
Collector Current	$I_C$	800	mA
Peak Collector Current	$I_{CM}$	1.0	A
Base Current	$I_B$	100	mA
Power Dissipation @ $T_a=25^\circ\text{C}$	$*P_{tot}$	625	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to +150	$^\circ\text{C}$

**THERMAL RESISTANCE**

Junction to Ambient in free air	$*R_{th(j-a)}$	200	K/W
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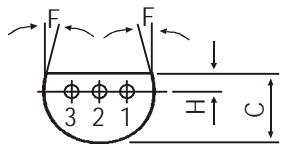
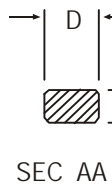
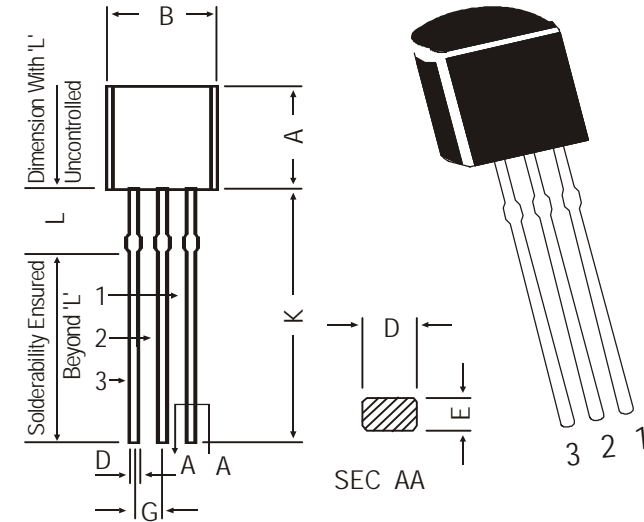
\* Valid provided that leads are kept at ambient temperature at a distance of 2mm from case.

**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$  Unless Otherwise Specified)**

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Emitter Voltage	$V_{CEO}$	$I_C=2\text{mA}, I_B=0$	25			V
Collector Base Voltage	$V_{CBO}$	$I_C=10\mu\text{A}, I_E=0$	40			V
Emitter Base Voltage	$V_{EBO}$	$I_E=100\mu\text{A}, I_C=0$	6			V
DC Current Gain	$h_{FE}$	$V_{CE}=1\text{V}, I_C=5\text{mA}$	45			
		$V_{CE}=1\text{V}, I_C=100\text{mA}$	120		300	
		<b>CN8050C/CN8550C</b>	120		200	
		<b>CN8050D/CN8550D</b>	160		300	
		$V_{CE}=1\text{V}, I_C=350\text{mA}$	60			
Collector Cut off Current	$I_{CBO}$	$V_{CB}=35\text{V}, I_E=0$			100	nA
Emitter Cut off Current	$I_{EBO}$	$V_{BE}=3\text{V}, I_C=0$			100	nA
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			0.5	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			1.2	V
Gain Bandwidth Product	$f_T$	$I_C=10\text{mA}, V_{CE}=5\text{V}, f=50\text{MHz}$		100		MHz
Collector Base Capacitance	$C_{cbo}$	$V_{CB}=10\text{V}, f=1\text{MHz}$			35	pF
			<b>PNP</b>		20	pF
		<b>NPN</b>				

**TO-92 Plastic Package**

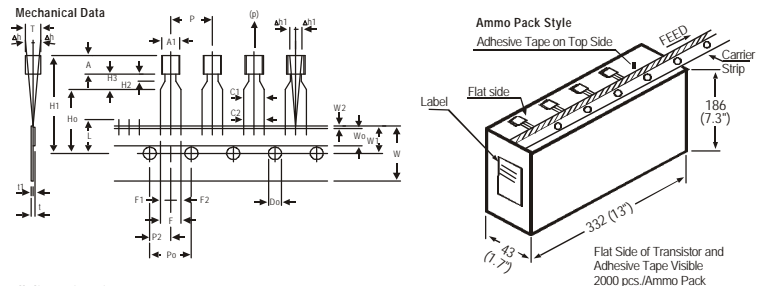
**TO-92 Transistors on Tape and Ammo Pack**



- PIN CONFIGURATION**
1. COLLECTOR
  2. BASE
  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 diminsions in mm.



All dimensions in mm

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		± 1.0	CUMULATIVE PITCH ERROR 1.0 mm/20 PITCH
FEED HOLE PITCH	Po		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 -0.2	
COMPONENT ALIGNMENT SIDE VIEW	Δh		0	1.0		AT TOP OF BODY
COMPONENT ALIGNMENT FRONT VIEW	Δh1		0	1.3		AT TOP OF BODY
TAPE WIDTH	W		18		± 0.5	
HOLD-DOWN TAPE WIDTH	W0		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		11 0.3-0.6
LEAD - TO - LEAD DISTANCE	F1, F2		2.54		+0.4 -0.1	
STAND OFF	H2	0.45		1.45		
CLINCH HEIGHT	H3			3.0		
LEAD PARALLELISM	C1 - C2			0.22		
PULL - OUT FORCE	(P)	6N				

- NOTES**
1. Maximum alignment deviation between leads will not to be greater than 0.2mm.
  2. Maximum non-cumulative variation between tape feed holes shall not exceed 1 mm in 20 pitches.
  3. Holddown tape will not exceed beyond the edge(s) of carrier tape and there shall be no exposure of adhesive.
  4. There will be no more than three (3) consecutive missing components in a tape.
  5. A tape trailer, having at least three feed holes are provided after the last component in a tape.
  6. Splices should 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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