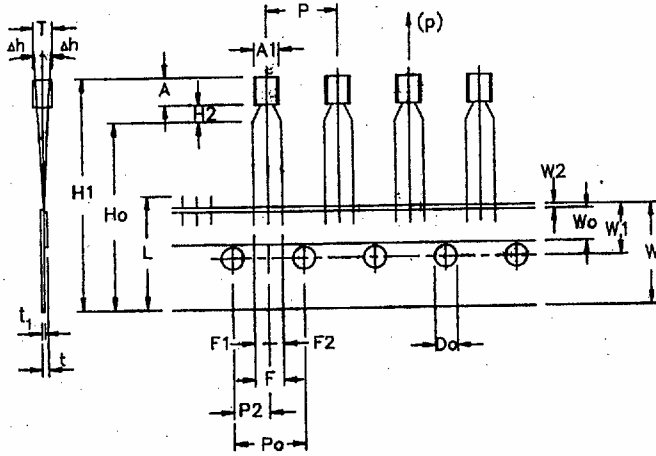




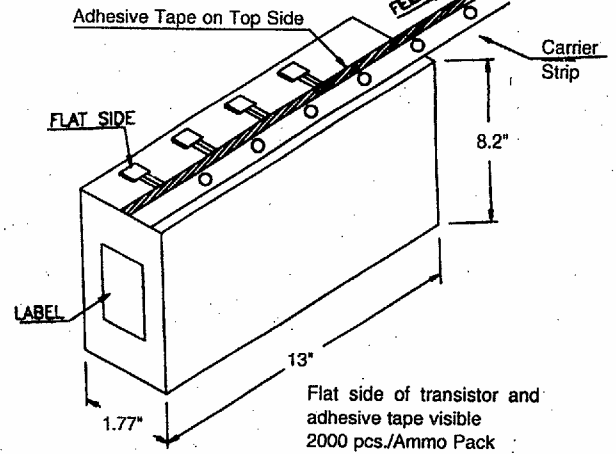
TO-92 Plastic Package Transistors (NPN)

Maximum Ratings						Electrical Characteristics (Ta=25°C, Unless Otherwise Specified)																
Type No.	V _{CB0} (V)	V _{CE0} (V)	V _{EBO} (V)	P _D (W)	I _C (A)	I _{CB0} (μA)	V _{CU} (V)	I _{CES} (μA)	V _{CE} (V)	h _{FE}	I _C & V _{CE}	V _{CE(SAT)} (V)	V _{BE(SAT)} (V)	I _C (mA)	C _{ob} (pF)	f _i (MHz)	t _{off} (ns)	N _F (dB)	C _{re} (pF)	CDIL Case Style		
	Min	Min	Min	@Tc=25°C	Max	Max	Max	Max	Max	Min	Max	Max	Max	Max	Typ	Max	Min	Max	Max	Max		
CSC2002M	60	60	5	0.5	0.3	0.1	60			90	180	50	1	0.6	1.2	300	7	15	50	140	10	TO-92-1
CSC2003	80	80	5	0.5	0.3	0.1	80			90	400	50	1	0.6	1.2	300	7	15	50	140	10	TO-92-1
CSC2003K	80	80	5	0.5	0.3	0.1	80			200	400	50	1	0.6	1.2	300	7	15	50	140	10	TO-92-1
CSC2003L	80	80	5	0.5	0.3	0.1	80			135	270	50	1	0.6	1.2	300	7	15	50	140	10	TO-92-1
CSC2003M	80	80	5	0.5	0.3	0.1	80			90	180	50	1	0.6	1.2	300	7	15	50	140	10	TO-92-1
CSC2120	35	30	5	0.6	0.8	0.1	35			100	320	100	1	0.5		500	13		120	10	TO-92-1	
CSC2120O	35	30	5	0.6	0.8	0.1	35			100	200	100	1	0.5		500	13		120	10	TO-92-1	
CSC2120Y	35	30	5	0.6	0.8	0.1	35			160	320	100	1	0.5		500	13		120	10	TO-92-1	
CSC2216	50	45	4	0.3	0.05	0.1	50			40	100	12.5	12.5	0.2	1.5	15	2	300		13	TO-92-3	
CSC2229Y	200	150	5	0.625	0.5	0.1	200			120	360	10	5	0.5	1	10	3.5	5		120	10	TO-92-1
CSC2240	120	120	5	0.3	0.1	0.1	120			200	700	2	6	0.3		10	3.0		100	1	6	TO-92
CSC2240BL	120	120	5	0.3	0.1	0.1	120			350	700	2	6	0.3		10	3.0		100	1	6	TO-92
CSC2240GR	120	120	5	0.3	0.1	0.1	120			200	400	2	6	0.3		10	3.0		100	1	6	TO-92-1
CSC2271	300	300	6	0.9	0.1	1	200			40	200	10	10	0.6	1	20	7.5	50		10	TO-92-1	
CSC2271C	300	300	6	0.9	0.1	1	200			40	80	10	10	0.6	1	20	7.5	50		10	TO-92-1	
CSC2271D	300	300	6	0.9	0.1	1	200			60	120	10	10	0.6	1	20	7.5	50		10	TO-92-1	
CSC2271E	300	300	6	0.9	0.1	1	200			100	200	10	10	0.6	1	20	7.5	50		10	TO-92-1	
CSC2274D	100	80	5	0.6	0.5	1	40			60	120	50	5	0.6	1.2	400	5		120	10	TO-92-1	
CSC2274E	100	80	5	0.6	0.5	1	40			100	200	50	5	0.6	1.2	400	5		120	10	TO-92-1	
CSC2274F	100	80	5	0.6	0.5	1	40			160	320	50	5	0.6	1.2	400	5		120	10	TO-92-1	
CSC2274K	100	80	5	0.6	0.5	1	40			60	320	50	5	0.6	1.2	400	5		120	10	TO-92-1	
CSC2309	55	50	5	0.2	0.1	0.5	18			250	1200	2	12	0.2		10	3.5	150	230	2	TO-92-1	
CSC2309D	55	50	5	0.2	0.1	0.5	18			250	500	2	12	0.2		10	3.5	150	230	2	TO-92-1	
CSC2309E	55	50	5	0.2	0.1	0.5	18			400	800	2	12	0.2		10	3.5	150	230	2	TO-92-1	
CSC2309F	55	50	5	0.2	0.1	0.5	18			600	1200	2	12	0.2		10	3.5	150	230	2	TO-92-1	
CSC2328A	30	30	5	1	1.5	0.1	30			100	320	500	2	2		1500	30		120	500	TO-92-1	
CSC2328AO	30	30	5	1	1.5	0.1	30			100	200	500	2	2		1500	30		120	500	TO-92-1	

MECHANICAL DATA



Ammo Pack Style



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		±0,6	
Component Alignment	Δh		0	1	-0,2	At Top of Body
Tape Width	W		18		±0,5	
Hold-Down Tape Width	W0		6		±0,2	
Hole Position	W1		9		±0,7	
Hold-Down Tape Position	W2		0,5		±0,2	
Lead Wire Clinch Height	Ho		16		±0,5	
Component Height	H1			32,25		
Length of Snipped leads	L			11,0		
Feed Hole Diameter	Do		4		±0,2	
Total Tape Thickness	t			1,2		t, 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				

Dimensions in m.m.

- 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 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.

This datasheet has been downloaded from:

www.DatasheetCatalog.com

Datasheets for electronic components.



LittleDiode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.