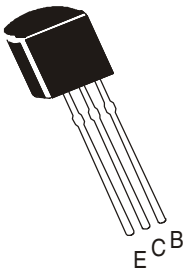
NPN SILICON PLANAR EPITAXIAL TRANSISTOR

CSC1845



TO-92
Plastic Package

For use as the middle range Amplifier in Hi-Fi and other similar Amplifier Applications

ABSOLUTE MAXIMUM RATINGS (T_a=25ºC)

DESCRIPTION	SYMBOL	VALUE	UNITS
Collector Emitter Voltage	V_{CEO}	120	V
Collector Base Voltage	V_{CBO}	120	V
Emitter Base Voltage	V_{EBO}	5	V
Base Current	I_B	10	mA
Collector Current	I_C	50	mA
Power Dissipation @ T_a=25ºC	P_C	500	mW
Junction Temperature	T_j	+125	ºC
Storage Temperature Range	T_{stg}	- 55 to + 125	ºC

ELECTRICAL CHARACTERISTICS (T_a=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Cut off Current	I_{CBO}	V_{CB} = 120V, I_E = 0			50	nA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 5.0V, Ic = 0			50	nA
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 10mA, I_B = 1.0mA			0.30	V
Base Emitter On Voltage	$V_{BE(on)}$	V_{CE} = 6.0V,Ic = 1.0mA	0.55		0.65	V
DC Current Gain	h_{FE} *h_{FE}	V_{CE} = 6.0V, I_C = 0.1 mA V_{CE} = 6.0V, I_C = 1.0 mA	150 200		 1200	
Transition Frequency	f_T	V_{CE} = 6.0V, Ic = - 1.0mA	50			MHz
Output Capacitance	C_{ob}	V_{CB} = 30V, I_E =0, f = 1.0MHz			2.5	pF
Noise Voltatge	NV	V_{CE} = 5.0V, I_C = - 1.0mA, R_G =100kΩ G_V = 80 dB, f = 10 Hz to 1.0 KHz			40	mV

***h_{FE} Classifications** **P : 200 - 400** **F : 300 - 600** **E : 400 - 800** **U : 600 - 1200**

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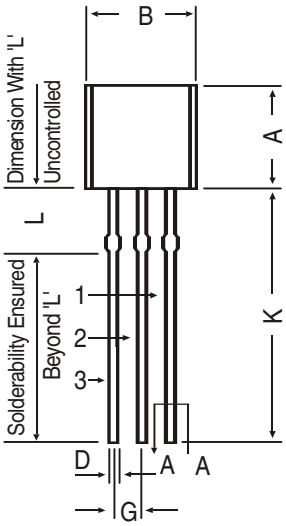
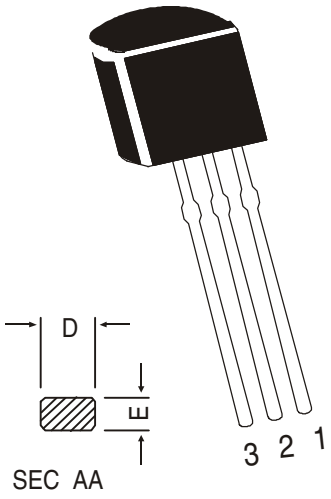
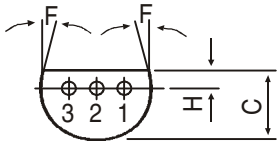




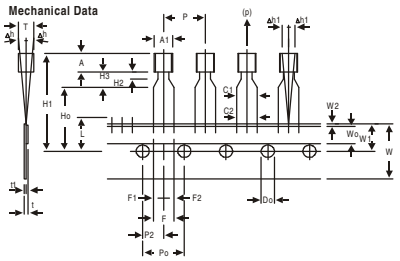


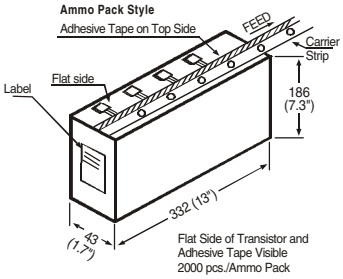
PIN CONFIGURATION
1. BASE
2. COLLECTOR
3. EMITTER

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.

TO-92 Transistors on Tape and Ammo Pack





All dimensions in mm

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		± 1.0	
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 SIDE VIEW	△h		0	1.0		AT TOP OF BODY
COMPONENT ALIGNMENT FRONT VIEW	△h1		0	1.3		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	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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