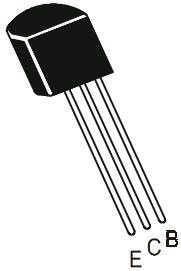


**NPN SILICON PLANAR EPITAXIAL TRANSISTOR**

**CSC388ATM**



**TO - 92  
Plastic Package**

TV Final Picture IF Amplifier Applications

**ABSOLUTE MAXIMUM RATINGS (Ta=25°C )**

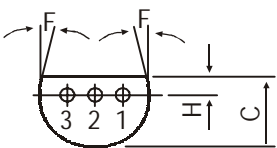
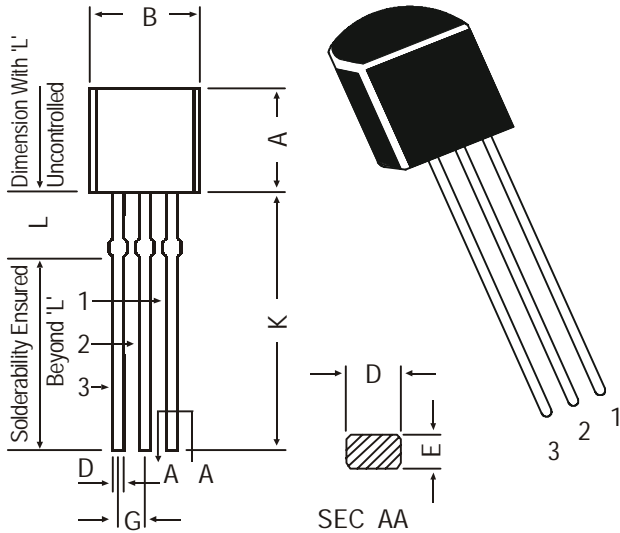
DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	$V_{CB0}$	30	V
Collector Emitter Voltage	$V_{CEO}$	25	V
Emitter Base Voltage	$V_{EBO}$	4	V
Collector Current	$I_C$	50	mA
Emitter Current	$I_E$	- 50	mA
Collector Power Dissipation	$P_C$	300	mW
Operating And Storage Junction Temperature Range	$T_j, T_{stg}$	-55 to +125	°C

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

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Cut off Current	$I_{CBO}$	$V_{CB}=30V, I_E = 0$	-	-	100	nA
Emitter Cut off Current	$I_{EBO}$	$V_{EB}=3, I_C=0$	-	-	1.0	µA
Collector Emitter Voltage	$V_{CEO}$	$I_C=10mA, I_B=0$	25	-	-	V
DC Current Gain	$h_{FE}$	$V_{CE}=12.5V, I_C=12.5mA$	20	-	200	
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=15mA, I_B=1.5mA$	-	-	0.2	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=15mA, I_B=1.5mA$	-	-	1.5	V
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	0.8	-	2.0	pF
Collector- Base Time Constant	$C_c, r_{bb}'$	$V_{CB}=10V, I_E= - 1mA$ $f=30MHz$	-	-	25	ps
Transition Frequency	$f_T$	$V_{CE}=12.5V, I_C=12.5mA$	300	-	-	MHz
Power Gain	$G_{pe}$	$V_{CC}=12.5V, I_E= - 12.5mA$ $f=45MHz$	28	-	36	dB

TO-92 Plastic Package

TO-92 Transistors on Tape and Ammo Pack

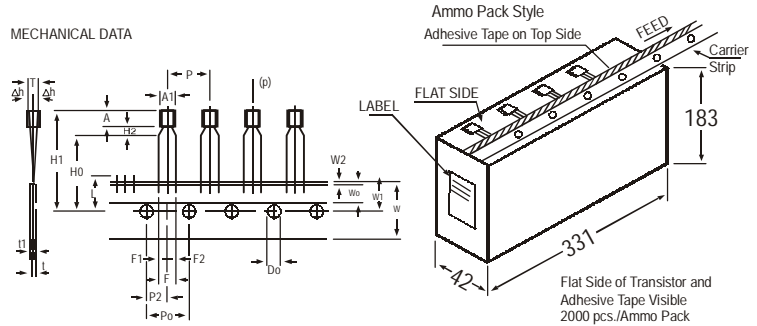


PIN CONFIGURATION

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.



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	
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	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 F1,	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.

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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**Continental Device India Limited**

C-120 Naraina Industrial Area, New Delhi 110 028, India.

Telephone + 91-11-2579 6150, 5141 1112 Fax + 91-11-2579 5290, 5141 1119

email@cdil.com www.cdilsemi.com