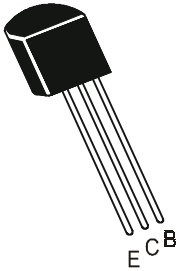


**NPN SILICON PLANAR EPITAXIAL TRANSISTOR**

**CSC388ATM**



**TO - 92  
Plastic Package**

**TV Final Picture IF Amplifier Applications**

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

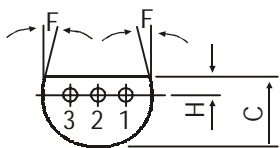
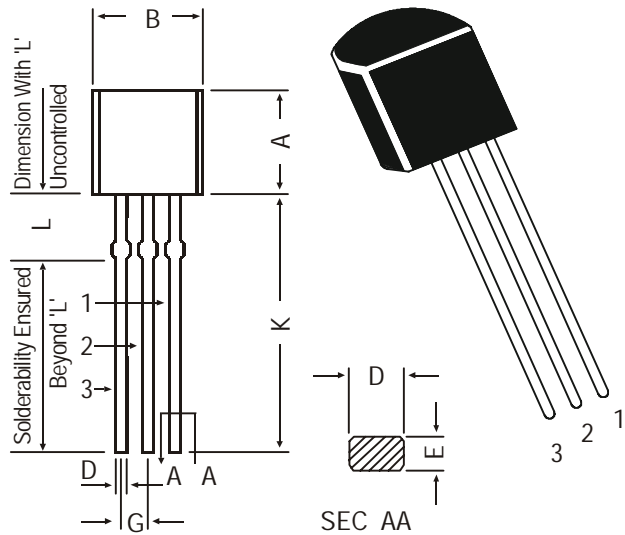
DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	$V_{CB0}$	30	V
Collector Emitter Voltage	$V_{CEO}$	25	V
Emitter Base Voltage	$V_{EBO}$	4	V
Collector Current	$I_C$	50	mA
Emitter Current	$I_E$	- 50	mA
Collector Power Dissipation	$P_C$	300	mW
Operating And Storage Junction Temperature Range	$T_j, T_{stg}$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



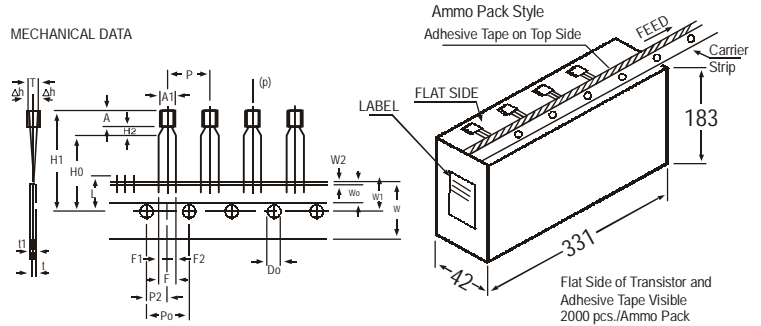
PIN CONFIGURATION

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 dimensions in mm.

MECHANICAL DATA



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	AT TOP OF BODY
COMPONENT ALIGNMENT	Δh		0	1		
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.

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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

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