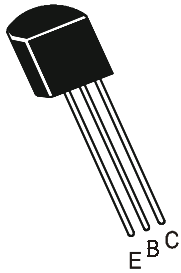


**NPN/PNP EPITAXIAL PLANAR SILICON TRANSISTORS**

**CSC1008 NPN  
CSA708 PNP  
TO-92  
CBE**



**Low Frequency Amplifier.**

**ABSOLUTE MAXIMUM RATINGS(Ta=25deg C unless otherwise specified)**

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector -Base Voltage	VCBO	80	V
Collector -Emitter Voltage	VCEO	60	V
Emitter -Base Voltage	VEBO	8.0	V
Collector Current	IC	700	mA
Collector Dissipation	PC	800	mW
Operating And Storage Junction Temperature Range	Tj, Tstg	-55 to +150	deg C

**ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)**

DESCRIPTION	SYMBOL	TEST CONDITION	CSC1008	CSA708	UNIT
Collector -Base Voltage	VCBO	IC=100uA, IE=0	>80	>80	V
Collector -Emitter Voltage	VCEO	IC=10mA, IB=0	>60	>60	V
Emitter-Base Voltage	VEBO	IE=100uA, IC=0	>8.0	>8.0	V
Collector-Cut off Current	ICBO	VCB=60V, IE=0	<100	<100	nA
Emitter-Cut off Current	IEBO	VEB=5V, IC=0	<100	<100	nA
DC Current Gain	hFE*	IC=50mA, VCE=2V	40-400	40-240	
Collector Emitter Saturation Voltage	VCE(Sat)*	IC=500mA, IB=50mA	<0.4	<0.7	V
Base Emitter Saturation Voltage	VBE(Sat) *	IC=500mA, IB=50mA	<1.1	<1.1	V

**DYNAMIC CHARACTERISTICS**

Transition Frequency	ft	IC=50mA, VCE=10V	>30	typ50	MHz
Out-Put Capacitance	Cob	VCB=10V, IE=0 f=1MHz	typ8	typ13	pF

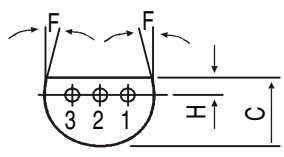
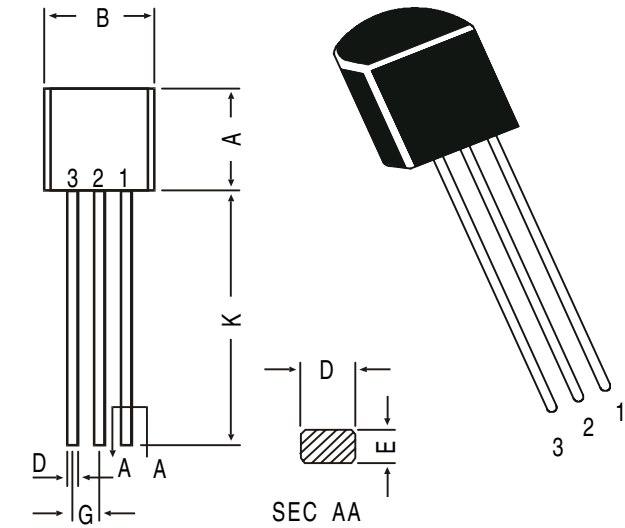
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<b>*hFE CLASSIFICATION</b>	<b>CSC1008</b>	<b>R : 40 - 80</b>	<b>O : 70 -140</b>	<b>Y : 120-240</b>	<b>G : 200-400</b>
	<b>CSA708</b>	<b>R : 40 - 80</b>	<b>O : 70 -140</b>	<b>Y : 120-240</b>	

\*Pulse Test: PW=350us, Duty Cycle=2%

# TO-92 Plastic Package

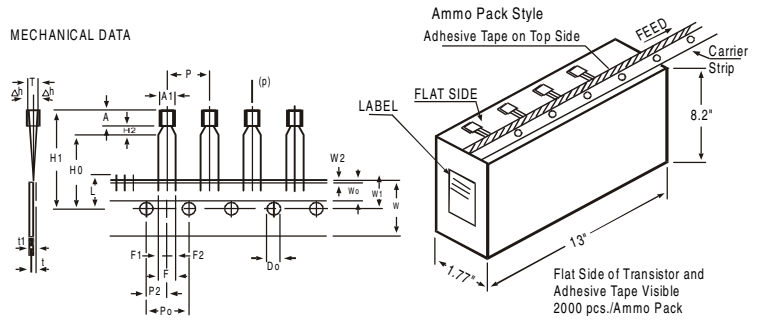
## TO-92 Transistors on Tape and Ammo Pack



- PIN CONFIGURATION**
1. COLLECTOR
  2. BASE
  3. EMITTER

All dimensions in mm.

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	—



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	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	AT TOP OF BODY
COMPONENT ALIGNMENT	Δh	0		1		
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		±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"	5.0K	17" x 15" x 13.5"	80.0K	23 kgs
TO-92 T&A	2K/ammo box	645 gm/2K pcs	12.5" x 8" x 1.8"	2.0K	17" x 15" x 13.5"	32.0K	12.5 kgs

## Customer Notes

### Disclaimer

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