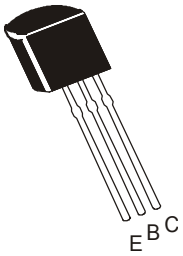
PNP SILICON TRANSISTOR

CSA 643



TO-92
Plastic Package

Audio Frequency General Purpose Power Amplifier Application

Complementary CSD 261

ABSOLUTE MAXIMUM RATINGS (Ta=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL		VALUE	UNIT
Collector Emitter Voltage	V_{CEO}		20	V
Collector Base Voltage	BV_{CBO}		40	V
Emitter Base Voltage	V_{EBO}		5	V
Collector Current Continuous	I_C		500	mA
Peak	I_{CM}		700	mA
Collector Power Dissipation	P_C		500	mW
Derate Above 25ºC			4.0	mW/ºC
Operating and Storage Junction Temperature Range	T_j, T_{stg}		-55 to +150	ºC

ELECTRICAL CHARACTERISTICS (Ta=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN		MAX	UNIT
Collector Emitter Breakdown Voltage	BV_{CEO}	I_C=10mA,I_B=0	20			V
Collector Base Breakdown Voltage	BV_{CBO}	I_C=100µA,I_B=0	40			V
Emitter Base Breakdown Voltage	BV_{EBO}	I_E=100µA, I_C=0	>5			V
Collector Cut off Current	I_{CBO}	V_{CB}=25V, I_E = 0			0.1	µA
Emitter Cut off Current	I_{EBO}	V_{EB}=3V, I_C = 0			0.1	µA
DC Current Gain	h_{FE}	V_{CE}=1V,I_C=100mA*	40		400	
Base Emitter Saturation Voltage	$V_{BE(sat)}$*	I_C=500mA,I_B= 50mA*			1.3	V
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=500mA,I_B=50mA*			0.4	V

***Pulse Condition: = Width ≤ 300us, Duty Cycle ≤ 2%.**

h_{FE} CLASSIFICATION	R	O	Y	G
	40-80	70-140	20-240	200-400

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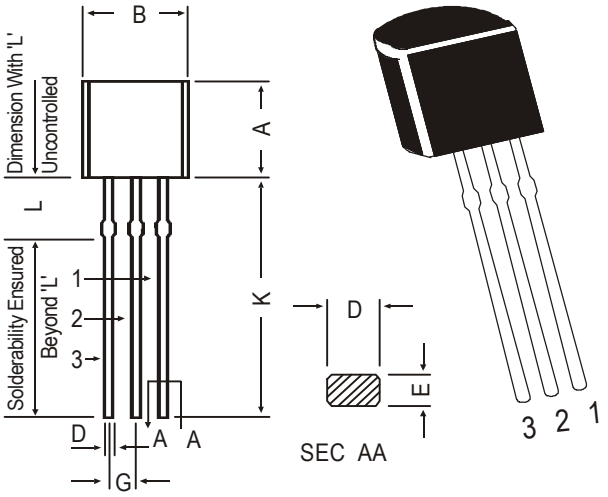
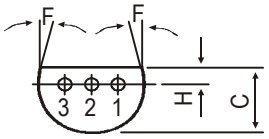


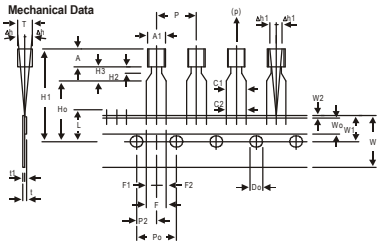


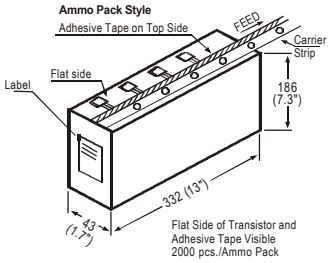
PIN CONFIGURATION
1. COLLECTOR
2. BASE
3. EMITTER

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	Δh		0	1.0		AT TOP OF BODY
COMPONENT ALIGNMENT FRONT VIEW	Δh1		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

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Disclaimer

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CDIL is a registered Trademark of
Continental Device India Limited
C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-579 6150 Fax + 91-11-579 9569, 579 5290
e-mail sales@cdil.com www.cdil.com