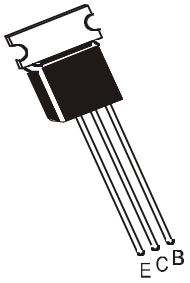
PNP SILICON PLANAR EPITAXIAL TRANSISTORS

CSA683, CSA684



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Plastic Package

Complementary CSC1383, CSC1384

AF Power Amplifier and Driver

ABSOLUTE MAXIMUM RATINGS(T_a=25° C unless specified otherwise)

DESCRIPTION	SYMBOL	CSA683	CSA684	UNIT
Collector -Base Voltage	V_{CBO}	30	60	V
Collector -Emitter Voltage	V_{CEO}	25	50	V
Emitter Base Voltage	V_{EBO}	5.0		V
Collector Current Peak	I_{CP}	1.5		A
Collector Current Continuous	I_C	1.0		A
Collector Power Dissipation	*P_C	1.0		W
Junction Temperature	T_j	150		° C
Storage Temperature	T_{stg}	- 55 to +150		° C

***P_C=750mW/Potting type: P_C=750mW**

ELECTRICAL CHARACTERISTICS (T_a=25° C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Cut off Current	I_{CBO}	V_{CB}=20V, I_E=0			0.1	µA
Collector Emitter Voltage	V_{CEO}	I_C=2mA, I_B=0				
		CSA683	25			V
		CSA684	50			V
Collector -Base Voltage	V_{CBO}	I_C=10µA, I_E=0				
		CSA683	30			V
		CSA684	60			V
Emitter-Base Voltage	V_{EBO}	I_E=10µA, I_C=0	5			V
DC Current Gain	*h_{FE}	I_C=500mA, V_{CE}=10V	85		340	
		I_C=1A, V_{CE}=5V	50			
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=500mA, I_B=50mA			0.4	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=500mA, I_B=50mA			1.2	V
Transition Frequency	f_T	V_{CE}=10V, I_C=50mA		200		MHz
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz			30	pF

***h_{FE} Classifications** **Q : 85 - 170** **R : 120 - 240** **S : 170 - 340**

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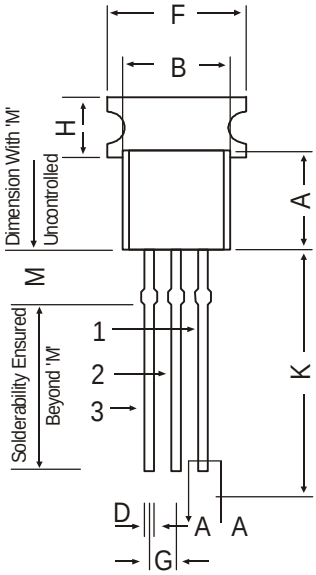
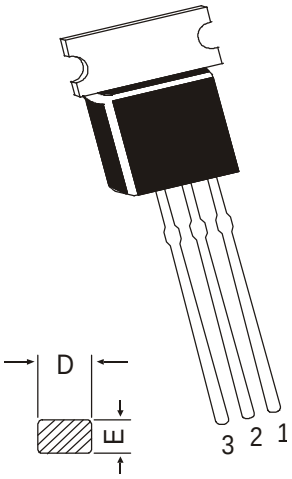
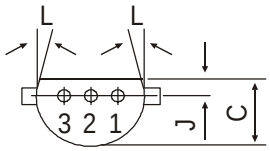




SEC AA

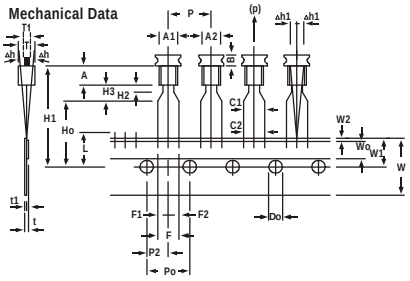


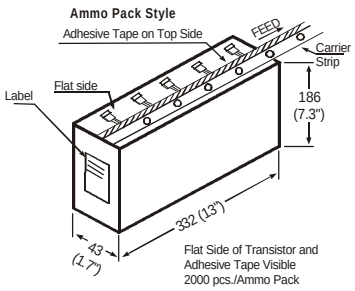
PIN CONFIGURATION

1. BASE
2. COLLECTOR
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	—	5.40
G	1.14	1.40
H	—	2.54
K	12.70	—
L	5 DEG	
J	1.14	1.53
M	1.982	2.082





All dimensions in mm

ITEM	SYMBOL	SPECIFICATION			
		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
*1 FEED HOLE PITCH	Po		12.7		± 0.3
FEED HOLE CENTRE TO *2 COMPONENT CENTRE	P2		6.35		± 0.4
DISTANCE BETWEEN OUTER LEADS	F		5.08		+ 0.6 - 0.2
*3 COMPONENT ALIGNMENT SIDE VIEW	△h		0	1.0	
*4 COMPONENT ALIGNMENT FRONT VIEW	△h1		0	1.3	
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			32.25	
LENGTH OF SNIPPED LEADS	L			11.0	
FEED HOLE DIAMETER	Do		4		± 0.2
*5 TOTAL TAPE THICKNESS	t			1.2	
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			
HEAT SINK WIDTH	A2			5.40	
HEAT SINK HEIGHT	B			2.54	
HEAT SINK THICKNESS	T1			0.45	

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 is provided after the last component in a tape.
6. Splices should not interfere with the sprocket feed holes.

REMARKS

*1 CUMULATIVE PITCH ERROR 1.0 mm/20 PITCH *2 TO BE MEASURED AT BOTTOM OF CLINCH
*3 AT TOP OF BODY *4 AT TOP OF BODY *5 t1 0.3-0.6

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-237 Bulk	1K/polybag	240 gm/1K pcs	3" x 7.5" x 7.5"	5K	17" x 15" x 13.5"	80K	26.2 kgs
TO-237 T&A	2K/ammo box	725 gm/2K pcs	12.5" x 8" x 1.8"	2K	17" x 15" x 13.5"	32K	13.8 kgs

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Plastic Package

Disclaimer

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