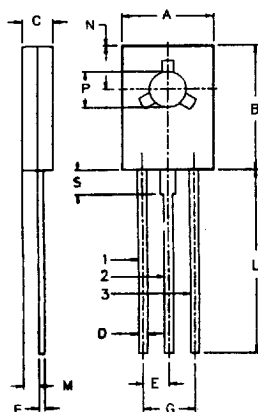
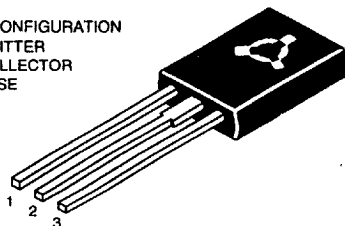


CSA1220, 1220A PNP PLASTIC POWER TRANSISTORS

Complementary CSC2690, 2690A

Audio frequency and High frequency Power Amplifier

PIN CONFIGURATION
1. EMITTER
2. COLLECTOR
3. BASE



DIM	MIN.	MAX.
A	7.4	7.8
B	10.5	10.8
C	2.4	2.7
D	0.7	0.9
E	2.25	TYP.
F	0.49	0.75
G	4.5	TYP.
L	15.7	TYP.
M	1.27	TYP.
N	3.75	TYP.
P	3.0	3.2
S	2.5	TYP.

ALL DIMENSIONS IN MM

ABSOLUTE MAXIMUM RATINGS

		1220	1220A
Collector-base voltage (open emitter)	V_{CBO}	max. 120	160 V
Collector-emitter voltage (open base)	V_{CEO}	max. 120	160 V
Collector current (DC)	I_C	max.	1.2 A
Total power dissipation up to $T_C = 25^\circ\text{C}$	P_{tot}	max.	20 W
Junction temperature	T_j	max.	150 $^\circ\text{C}$
Collector-emitter saturation voltage $I_C = 1\text{A}; I_B = 0.2\text{A}$	V_{CEsat}	max.	0.7 V
D.C. current gain $I_C = 0.3\text{A}; V_{CE} = 5\text{V}$	h_{FE}	min. max.	60 320

RATINGS (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

Limiting values

		1220	1220A
Collector-base voltage (open emitter)	V_{CBO}	max. 120	160 V
Collector-emitter voltage (open base)	V_{CEO}	max. 120	160 V

Emitter-base voltage (open collector)	V_{EBO}	max.	5.0	V
Collector current (DC)	I_C	max.	1.2	A
Collector current (Pulse)(1)	I_C	max.	2.5	A
Base current	I_B	max.	0.3	A
Total power dissipation up to $T_A = 25^\circ\text{C}$	P_{tot}	max.	1.2	W
Total power dissipation up to $T_C = 25^\circ\text{C}$	P_{tot}	max.	20	W
Junction temperature	T_j	max.	150	$^\circ\text{C}$
Storage temperature	T_{stg}		-65 to +150	$^\circ\text{C}$

CHARACTERISTICS $T_{amb} = 25^\circ\text{C}$ unless otherwise specified

			1220	1220A
Collector cutoff current $I_E = 0; V_{CB} = 120\text{V}$	I_{CBO}	max.	1.0	μA
Emitter cut-off current $I_C = 0; V_{EB} = 3\text{V}$	I_{EBO}	max.	1.0	μA
Breakdown voltages $I_C = 1\text{ mA}; I_B = 0$	V_{CEO}	min.	120	160 V
$I_C = 1\text{ mA}; I_E = 0$	V_{CBO}	min.	120	160 V
$I_E = 1\text{ mA}; I_C = 0$	V_{EBO}	min.	5.0	V
Saturation voltages $I_C = 1\text{ A}; I_B = 0.2\text{ A}$	V_{CEsat}^*	max.	0.7	V
	V_{BEsat}^*	max.	1.3	V
D.C. current gain $I_C = 5\text{ mA}; V_{CE} = 5\text{ V}$	h_{FE}^*	min.	35	
$I_C = 0.3\text{ A}; V_{CE} = 5\text{ V}^{**}$	h_{FE}^*	min.	60	
		max.	320	
Output capacitance at $f = 1\text{ MHz}$ $I_E = 0, V_{CB} = 10\text{V}$	C_o	typ.	26	pF
Transition frequency $I_C = 0.2\text{ A}; V_{CE} = 5\text{ V}$	f_T	typ.	175	MHz

* Pulse test: pulse width $\leq 350\text{ }\mu\text{s}$; duty cycle $\leq 2\%$. Pulsed.(1) $P_W \leq 10\text{ ms}$, duty cycle $\leq 50\%$ **** h_{FE} classification: R: 60-120 O: 100-200 Y: 160-320**