

LOW FREQUENCY GENERAL PURPOSE AMPLIFIER TRANSISTOR

P-N-P transistor

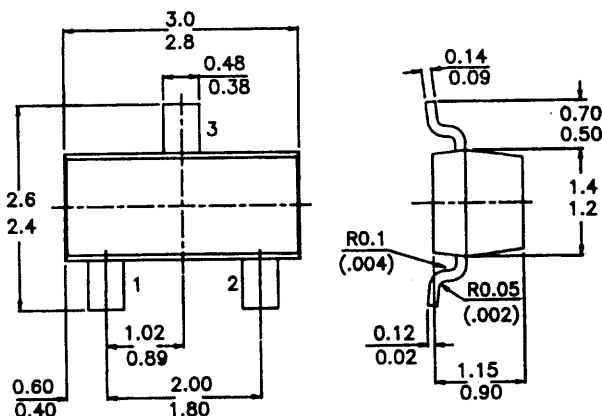
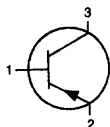
Marking

CSA1162Y-3E
CSA1162GR(G)-3F

PACKAGE OUTLINE DETAILS
ALL DIMENSIONS IN mm

Pin configuration

- 1 = BASE
- 2 = EMITTER
- 3 = COLLECTOR



ABSOLUTE MAXIMUM RATINGS

Collector-base voltage (open emitter)	-V _{CBO}	max.	50 V
Collector-emitter voltage (open base)	-V _{CEO}	max.	50 V
Emitter-base voltage (open collector)	-V _{EBO}	max.	5 V
Collector current (d.c.)	-I _C	max.	150 mA
Total power dissipation at T _{amb} = 25°C	P _{tot}	max.	150 mW
Junction temperature	T _j	max.	150 °C
D.C. current gain	h _{FE}	min.	70
-I _C = 2 mA; -V _{CE} = 6V		max.	400

RATINGS (at T_A = 25°C unless otherwise specified)

Limiting values

Collector-base voltage (open emitter)	-V _{CBO}	max.	50 V
Collector-emitter voltage (open base)	-V _{CEO}	max.	50 V
Emitter-base voltage (open collector)	-V _{EBO}	max.	5 V
Collector current (d.c.)	-I _C	max.	150 mA
Base current	-I _B	max.	30 mA

Total power dissipation at $T_{amb} = 25^{\circ}\text{C}$	P_{tot}	max.	150 mW
Storage temperature	T_{stg}	-50 to +150	$^{\circ}\text{C}$
Junction temperature	T_j	max.	150 $^{\circ}\text{C}$

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

Collector-emitter breakdown voltage $-I_C = 1 \text{ mA}; I_B = 0$	$-V_{(BR)CEO}$	min	50 V
Collector cut-off current $-V_{CB} = 50 \text{ V}; I_E = 0$	$-I_{CBO}$	max.	100 nA
Emitter cut-off current $V_{EB} = 5 \text{ V}; I_C = 0$	I_{EBO}	max.	100 nA
Saturation voltage $-I_C = 100 \text{ mA}; -I_B = 10 \text{ mA}$	$-V_{CEsat}$	max.	0.3 V
D.C. current gain $I_C = 2 \text{ mA}; -V_{CE} = 6 \text{ V}$	h_{FE}	min.	70
		max.	400
	Y	min.	120
		max.	240
Transition frequency $V_{CE} = 10 \text{ V}; I_C = 1 \text{ mA}$	GR(G)	min.	200
		max.	400
Collector output capacitance $V_{CB} = 10 \text{ V}; I_E = 0; f = 1 \text{ MHz}$	f_T	min.	80 MHz
Noise figure $V_{CE} = 6 \text{ V}; I_C = 0.1 \text{ mA}$ $f = 1 \text{ kHz}; R_g = 10 \text{ k}\Omega$	C_{ob}	max.	7 pF
		N_F	max.