SOT-23 Formed SMD Package **CSA1162**

LOW FREQUENCY GENERAL PURPOSE AMPLIFIER TRANSISTOR

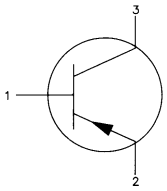
P-N-P transistor

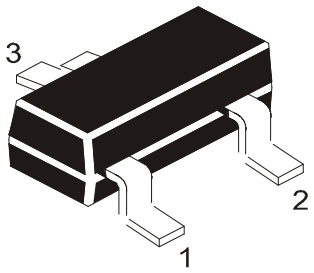
Marking

CSA1162Y–3E
CSA1162GR(G)–3F

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			
$-I_C$ = 2 mA; $-V_{CE}$ = 6V	h_{FE}	*min.*	*70*
		max.	*400*

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

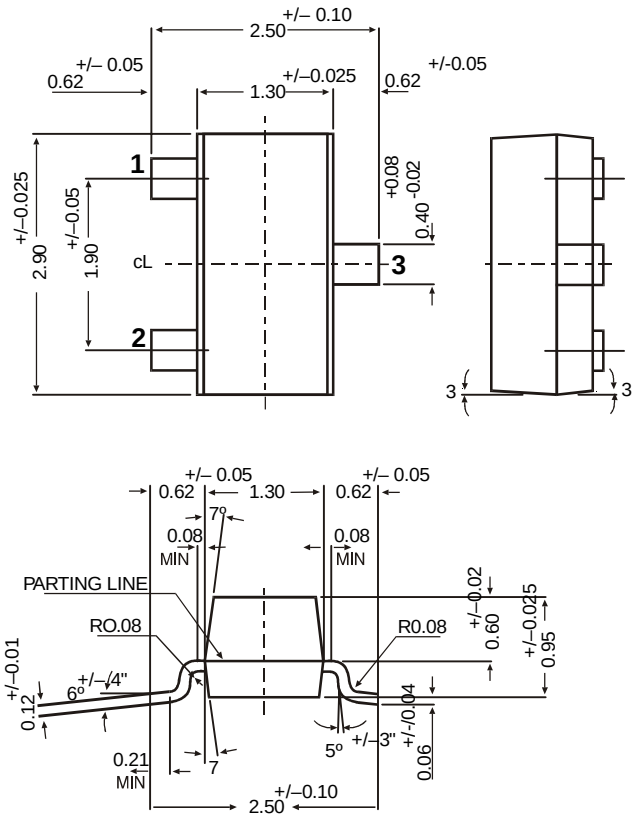
Limiting values			
Collector-base voltage (open emitter)	$-V_{CBO}$	*max.*	*50 V*
Collector-emitter voltage (open base)	$-V_{CEO}$	*max.*	*50 V*
Emitter-base voltage (open collector)	$-V_{EBO}$	*max.*	*5 V*
Collector current (d.c.)	$-I_C$	*max.*	*150 mA*
Base current	$-I_B$	*max.*	*30 mA*

Total power dissipation at T_{amb} = 25°C	P_{tot}	*max.*	*150 mW*
Storage temperature	*Tstg*	*–50 to*	*+150 °C*
Junction temperature	T_j	*max.*	*150 °C*

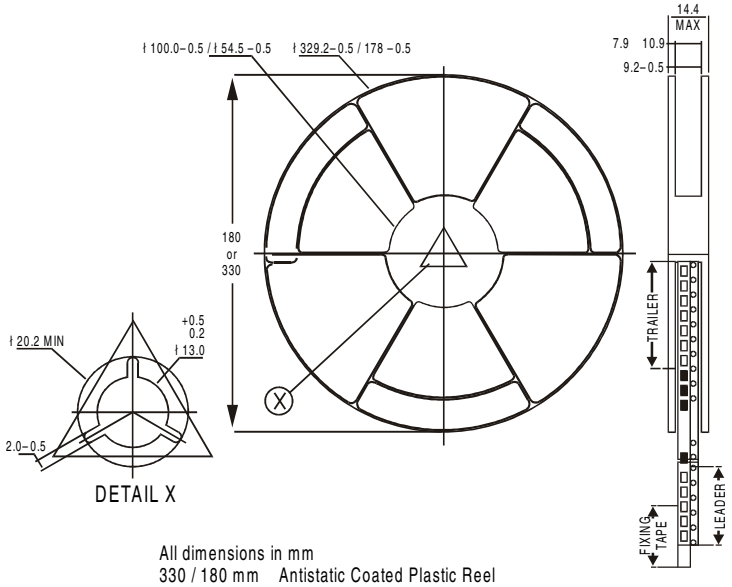
CHARACTERISTICS *(at T_A = 25°C unless otherwise specified)*

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

SOT-23 Formed SMD Package



SOT-23 Package Reel Information
Reel specifications for Packing (13"/7" reels)

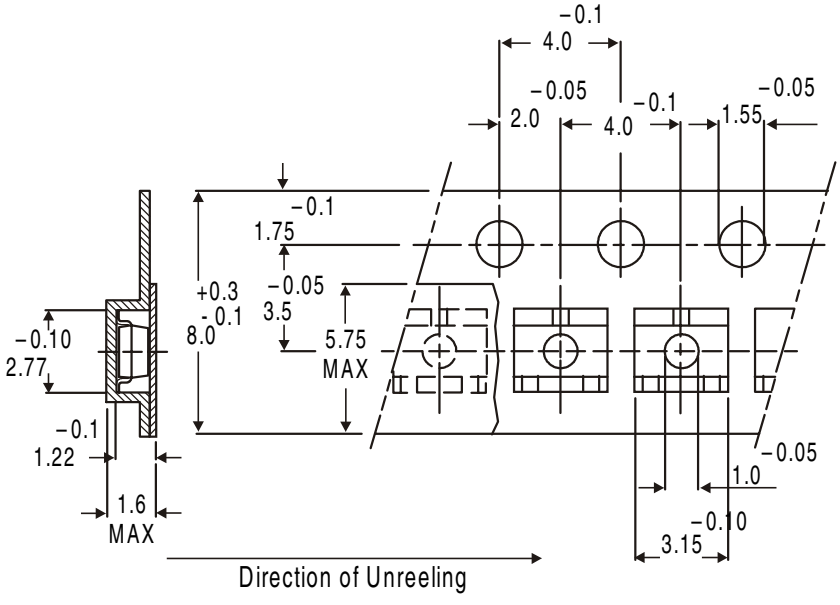


All dimensions in mm
330 / 180 mm Antistatic Coated Plastic Reel

NOTES:	8mm Tape Size of Reel 330 mm (13")	8mm Tape Size of Reel 180 mm (7")
No. of Devices	10,000 Pcs	3,000 Pcs

1. The bandolier of 330 mm reel contains at least 10,000 devices.
2. The bandolier of 180 mm reel contains at least 3,000 devices.
3. No more than 0.5% missing devices / reel. 50 empty compartments for 330 mm reel. 15 empty compartments for 180 mm reel.
4. Three consecutive empty places might be found provided this gap is followed by 6 consecutive devices.
5. The carrier tape (leader) starts with at least 75 empty positions (equivalent to 330 mm). In order to fix the carrier tape a self adhesive tape of 20 to 50 mm is applied. At the end of the bandolier at least 40 empty positions (equivalent to 160 mm) are there.

Tape Specification for SOT-23 Surface Mount Device



All dimensions in mm

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
SOT-23 T&R	3K/reel	136 gm/3K pcs	3" x 7.5" x 7.5"	12.0K	17" x 15" x 13.5"	192.0K	12 kgs
			9" x 9" x 9"	51.0K	19" x 19" x 19"	408.0K	28 kgs
	10K/reel	415 gm/10K pcs	13" x 13" x 0.5"	10.0K	17" x 15" x 13.5"	300.0K	16 kgs

Customer Notes

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Disclaimer

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