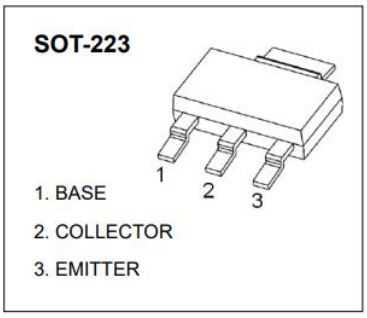
JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD.

AD-CZT5551 Plastic-Encapsulated Transistor

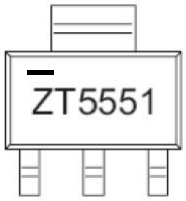
AD-CZT5551 Transistor (NPN)



FEATURES

- High voltage amplifier application
- AEC-Q101 qualified

MARKING



MAXIMUM RATINGS (T_j = 25°C unless otherwise specified)

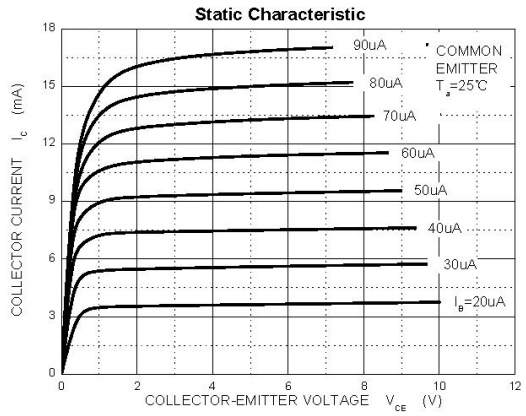
Parameter	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	180	V
Collector-emitter voltage	V_{CEO}	160	V
Emitter-base voltage	V_{EBO}	6	V
Collector continuous current	I_C 1)	600	mA
Collector power dissipation	P_C 2)	1	W
Thermal resistance from junction to ambient	$R_{\theta JA}$ 2)	125	°C/W
Operating junction and storage temperature range	T_j, T_{stg}	-55 ~ 150	°C

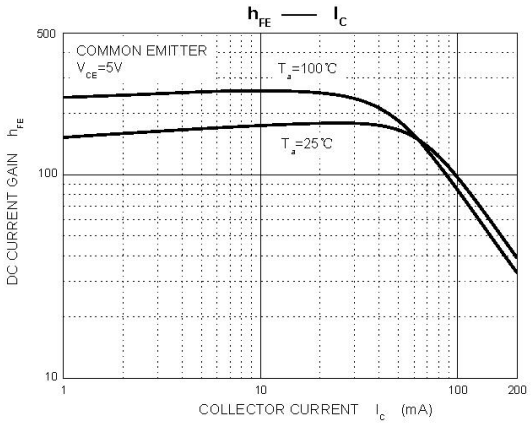
ELECTRICAL CHARACTERISTICS (T_j = 25°C unless otherwise specified)

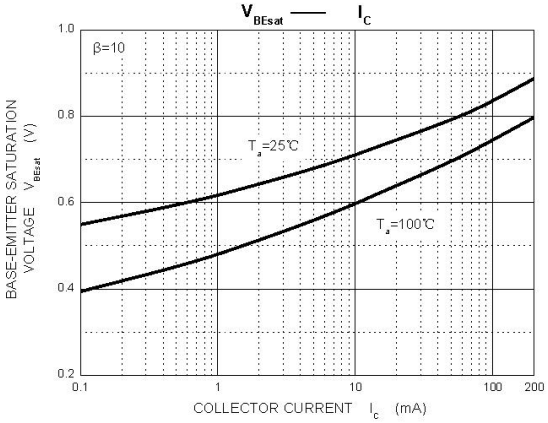
Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C = 0.1mA, I_E = 0A	180	-	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C = 1mA, I_B = 0A	160	-	-	V
Base-emitter breakdown voltage	$V_{(BR)EBO}$	I_E = 10μA, I_C = 0A	6	-	-	V
Collector-base cut-off current	I_{CBO}	V_{CB} = 120V, I_E = 0A	-	-	50	nA
Emitter-base cut-off current	I_{EBO}	V_{CB} = 4V, I_E = 0A	-	-	50	nA
DC current gain	$h_{FE(1)}$	V_{CE} = 5V, I_C = 1mA	80	-	-	-
	$h_{FE(2)}$	V_{CE} = 5V, I_C = 10mA	100	-	300	
	$h_{FE(3)}$	V_{CE} = 5V, I_C = 50mA	30	-	-	
Collector-emitter saturation voltage	$V_{CE(sat)(1)}$	I_C = 10mA, I_B = 1mA	-	-	0.15	V
	$V_{CE(sat)(2)}$	I_C = 50mA, I_B = 5mA	-	-	0.2	V
Base-emitter saturation voltage	$V_{BE(sat)(1)}$	I_C = 10mA, I_B = 1mA	-	-	1	V
	$V_{BE(sat)(2)}$	I_C = 50mA, I_B = 5mA	-	-	1	V
Transition frequency	f_T	V_{CE} = 10V, I_C = 10mA, f = 100MHz	100	-	300	MHz
Collector output capacitance	C_{ob}	V_{CE} = 10V, I_E = 0A, f = 1MHz	-	-	6	pF
Emitter input capacitance	C_{ib}	V_{BE} = -5V, I_C = 0A, f = 1MHz	-	-	20	pF

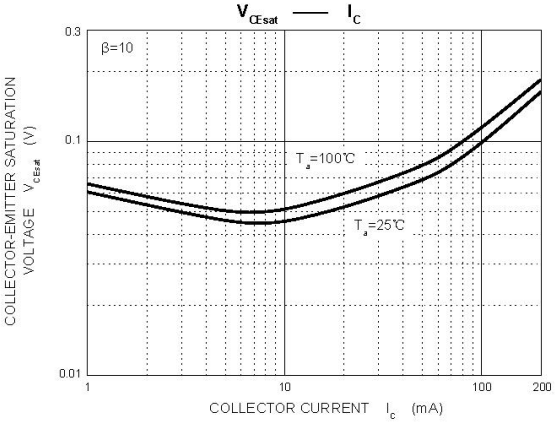
1) T_a = 25℃.
2) Measured with the device mounted on 1 inch^2 FR-4 board with 1oz. copper, in a still air environment with T_a = 25℃.

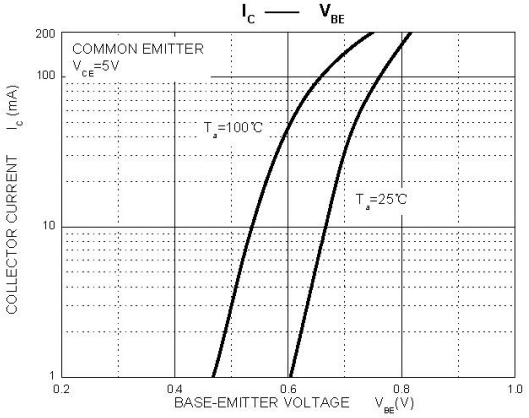
TYPICAL CHARACTERISTICS

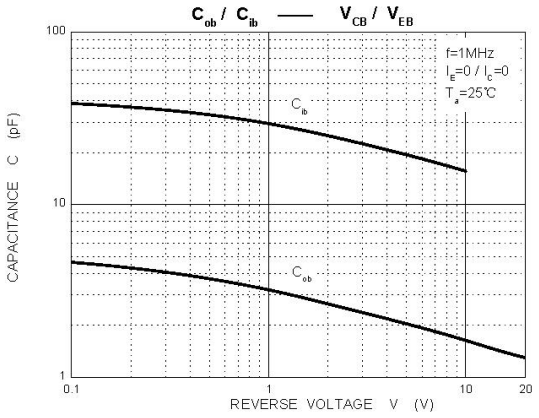


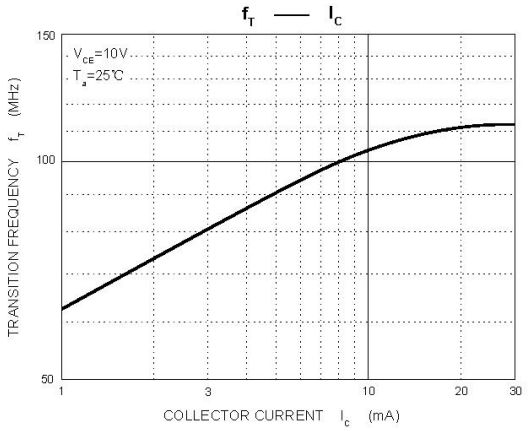


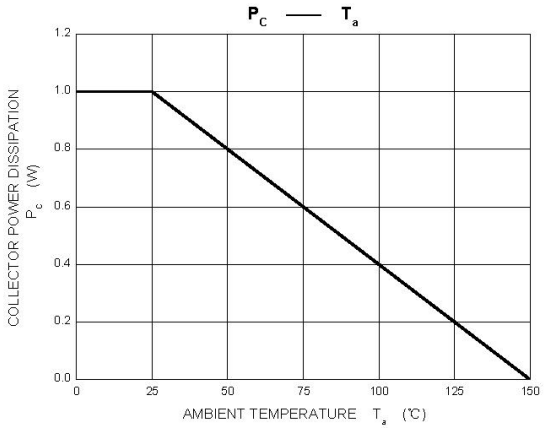




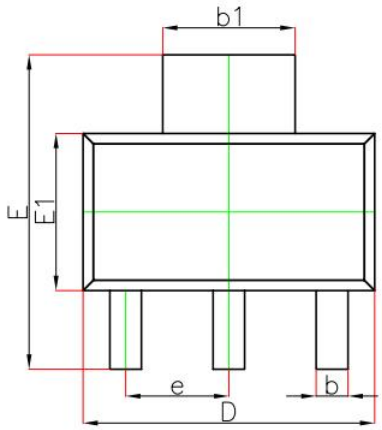


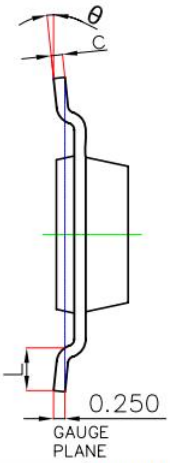


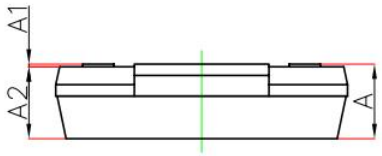




SOT-223 PACKAGE OUTLINE DIMENSIONS

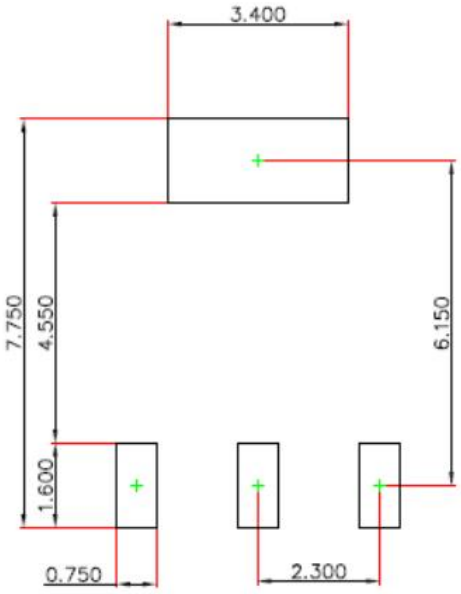






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	——	1.800	——	0.071
A1	0.020	0.100	0.001	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.840	0.026	0.033
b1	2.900	3.100	0.114	0.122
c	0.230	0.350	0.009	0.014
D	6.300	6.700	0.248	0.264
E	6.700	7.300	0.264	0.287
E1	3.300	3.700	0.130	0.146
e	2.300(BSC)		0.091(BSC)	
L	0.750	——	0.030	——
θ	0°	10°	0°	10°

SOT-223 SUGGESTED PAD LAYOUT



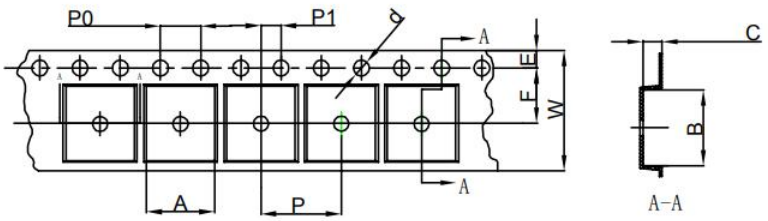
only.

Note:

1. Controlling dimension in millimeters.
2. General tolerance: ±0.05mm.
3. The pad layout is for reference purpose

SOT-223 TAPE AND REEL

SOT-223 Embossed Carrier Tape

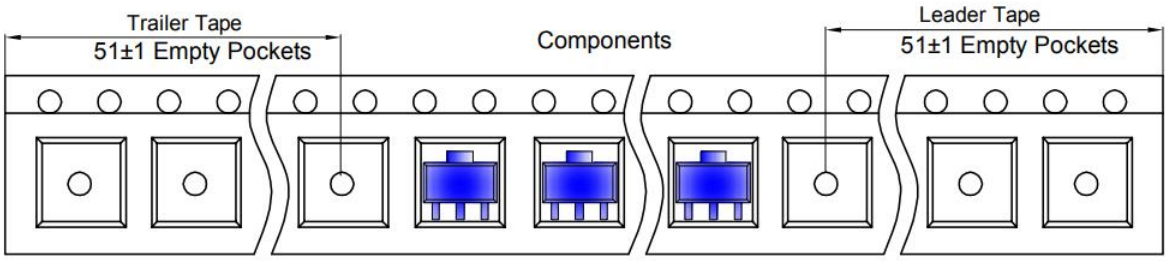


Packaging Description:

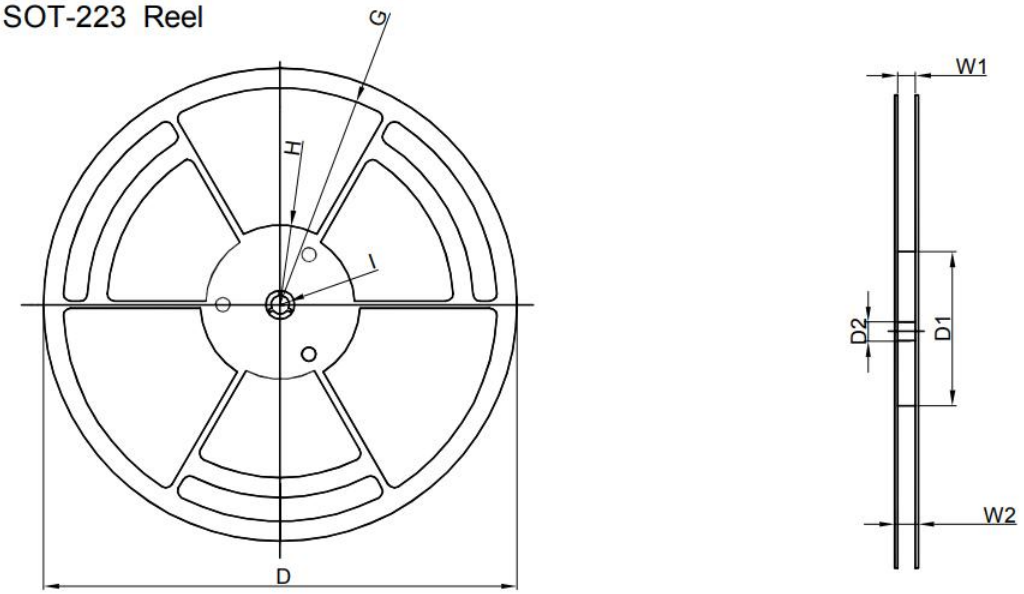
SOT-223 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 2,500 units per 13" or 33.0cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-223	6.765	7.335	1.88	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

SOT-223 Tape Leader and Trailer



SOT-223 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
13"Dia	Ø330.00	100.00	13.00	R151.00	R56.00	R6.50	12.40	17.60

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
2,500 pcs	13 inch	2,500 pcs	336×336×48	20,000 pcs	445×355×365	

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