

SOT-223 Plastic-Encapsulate Transistors

TRANSISTOR(PNP)

Features

- High Voltage
- Low saturation voltages

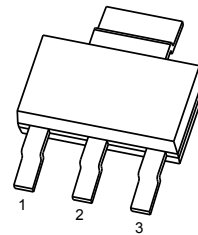
MARKING: ZT955

Limiting Values (Absolute Maximum Rating)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-180	V
V_{CEO}	Collector-Emitter Voltage	-140	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-4	A
P_C	Collector Power Dissipation	0.8	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	150	°C/W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~+150	°C

SOT-223

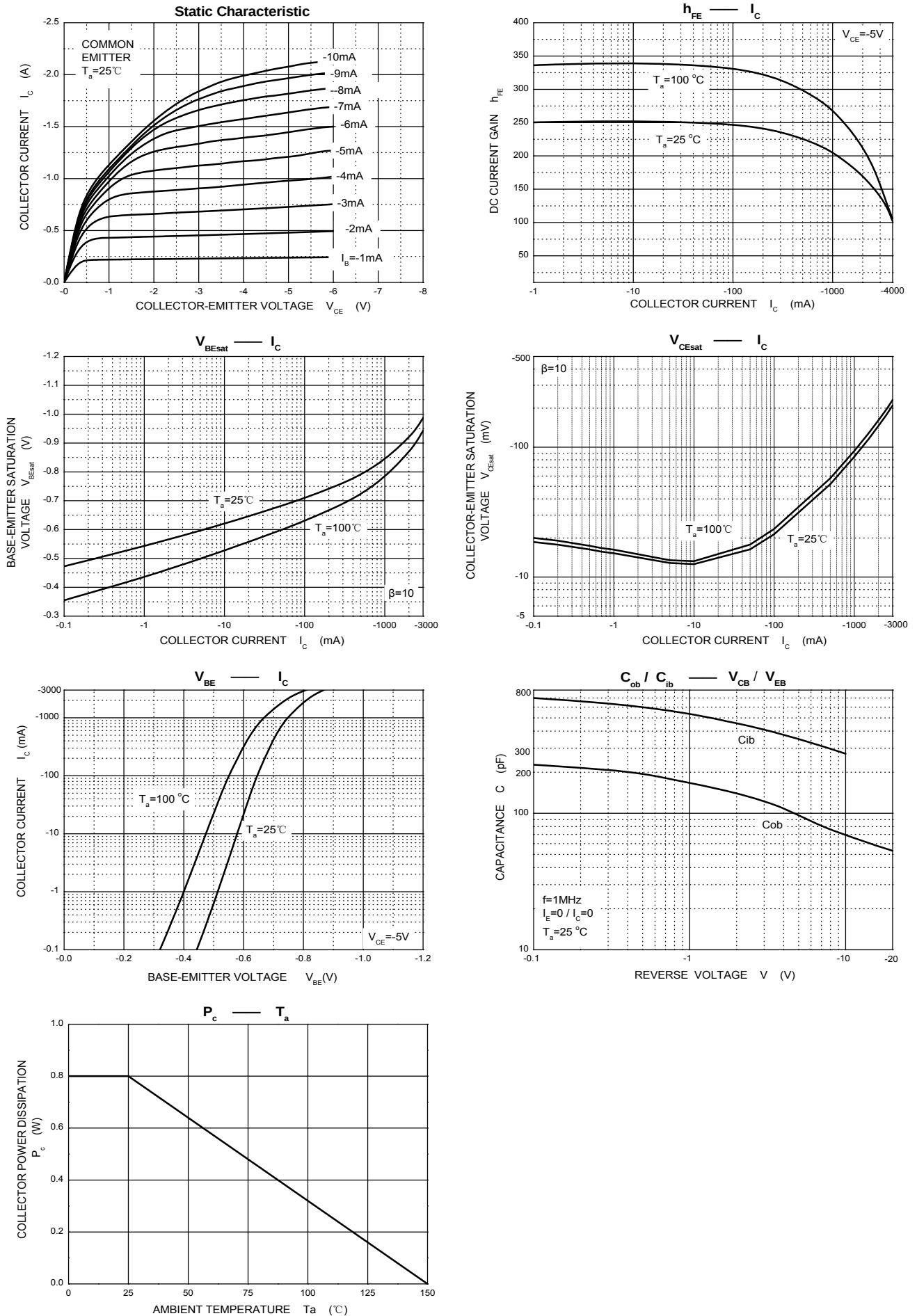
1. BASE
2. COLLECTOR
3. EMITTER



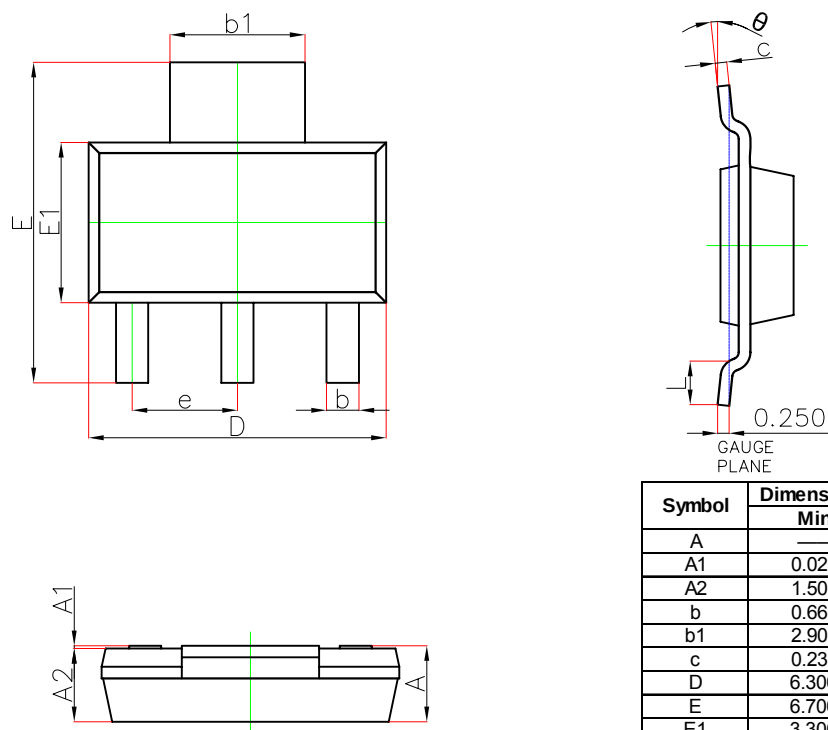
Electrical Characteristics ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ	Max.	Unit
Collector-base breakdown voltage	$V(BR)_{CBO}$	$I_C = -0.1\text{mA}, I_E = 0$	-180			V
Collector-emitter breakdown voltage	$V(BR)_{CEO}$	$I_C = -10\text{mA}, I_B = 0$	-140			V
Base-emitter breakdown voltage	$V(BR)_{EBO}$	$I_E = -0.1\text{mA}, I_C = 0$	-6			V
Collector cut-off current	I_{CBO}	$V_{CB} = -150\text{V}, I_E = 0$			-50	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -6\text{V}, I_C = 0$			-10	nA
DC current gain	$h_{FE}(1)$	$V_{CE} = -5\text{V}, I_C = -10\text{mA}$	100			
	$h_{FE}(2)$	$V_{CE} = -5\text{V}, I_C = -1\text{A}$	100		300	
	$h_{FE}(3)$	$V_{CE} = -5\text{V}, I_C = -3\text{A}$	75			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}, I_B = -5\text{mA}$			-60	mV
	$V_{CE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$			-120	mV
	$V_{CE(sat)}$	$I_C = -1\text{A}, I_B = -100\text{mA}$			-150	mV
	$V_{CE(sat)}$	$I_C = -3\text{A}, I_B = -300\text{mA}$			-370	mV
Collector-emitter saturation voltage	$V_{BE(sat)}$	$I_B = -300\text{mA}, I_C = -3\text{A}$			-1.11	V
Base-emitter voltage	V_{BE}	$V_{CE} = -5\text{V}, I_C = -3\text{A}$			-0.95	V
Transition frequency	f_T	$V_{CE} = -10\text{V}, I_C = -10\text{mA}, f = 100\text{MHz}$	30			MHz
Collector Output Capacitance	C_{ob}	$V_{CE} = -20\text{V}, I_C = 10\text{mA}, f = 30\text{MHz}$		40		pF

Typical Characteristics

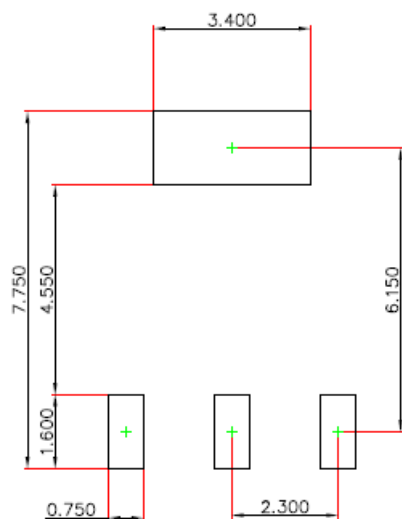


SOT-223 Package Outline Dimensions



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



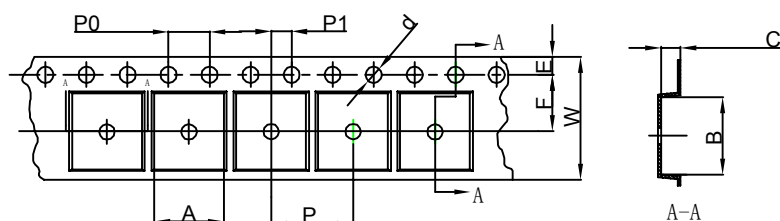
- Note:**
1. Controlling dimension: in millimeters.
 2. General tolerance: ± 0.050 mm.
 3. The pad layout is for reference purposes only.

NOTICE

JSHD reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSHD does not assume any liability arising out of the application or use of any product described herein.

SOT-223 Tape and Reel

SOT-223 Embossed Carrier Tape

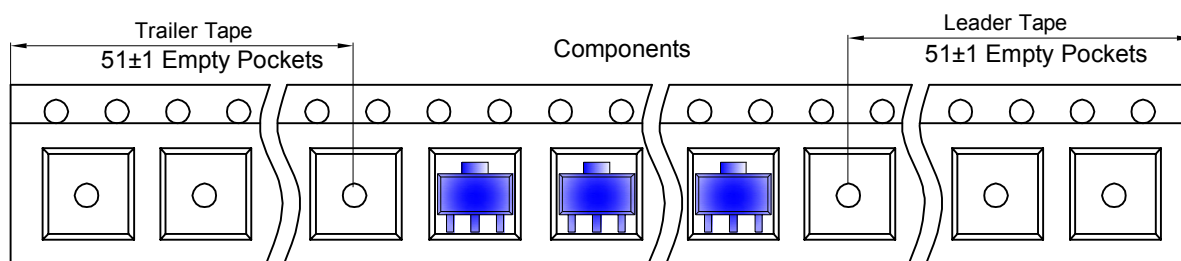


Packaging Description:

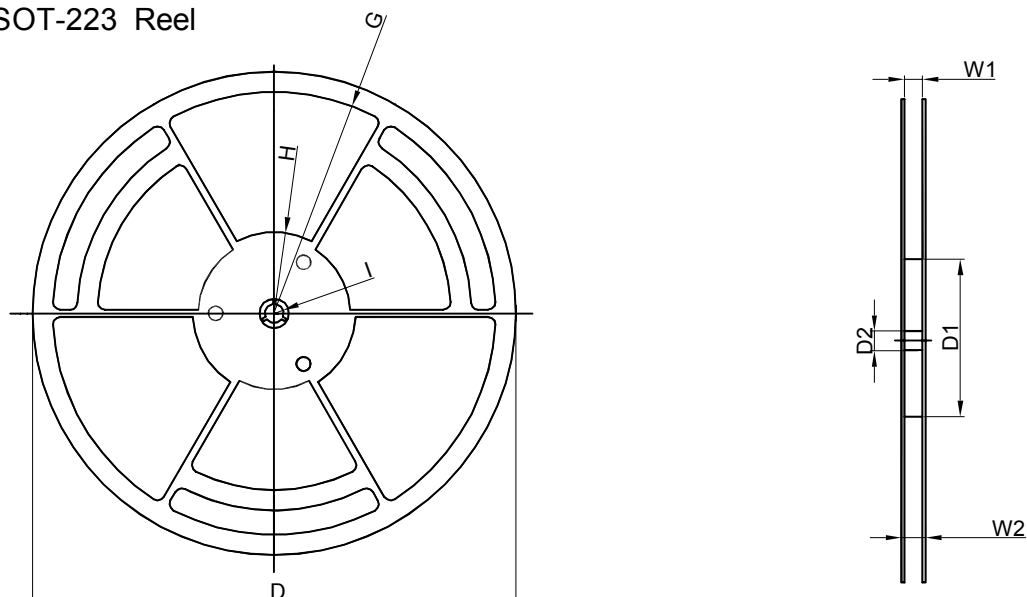
SOT-223 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts 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	