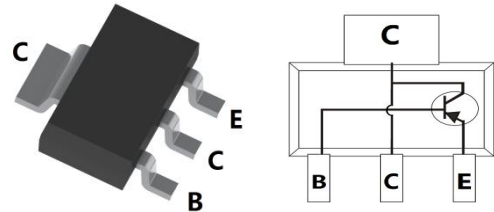


### FEATURES

- High Voltage Driver Application
- Surface Mount device

### MECHANICAL DATA

- Case: SOT-223
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.04 grams (approximate)



**SOT-223**

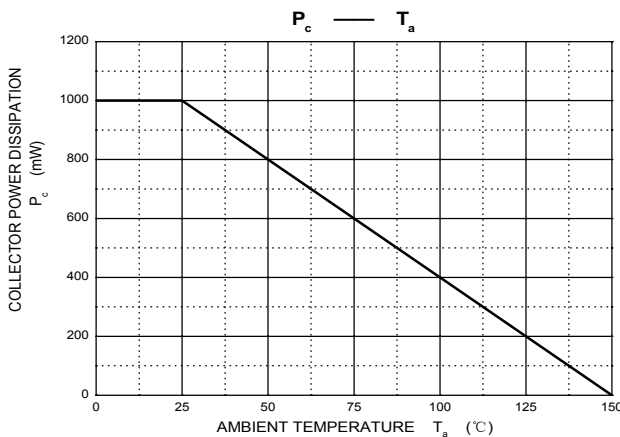
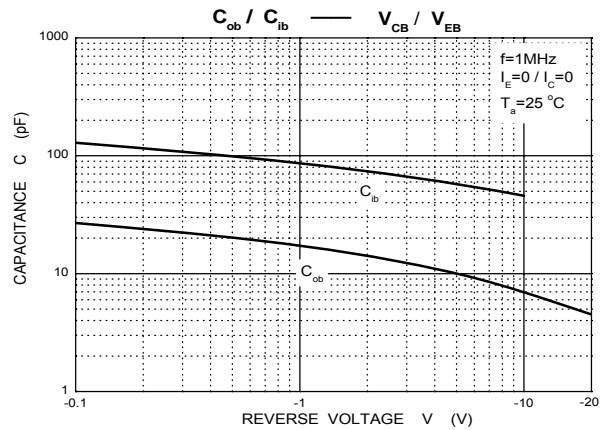
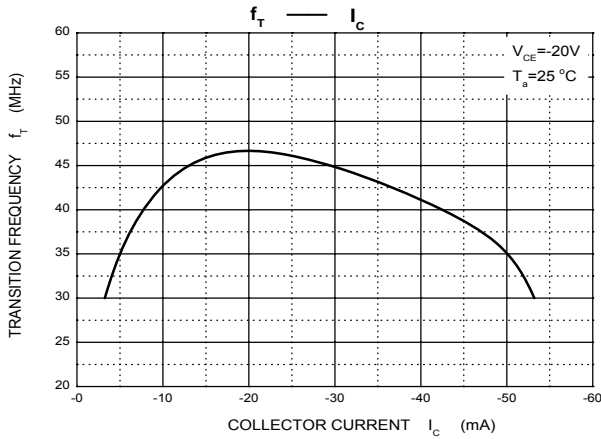
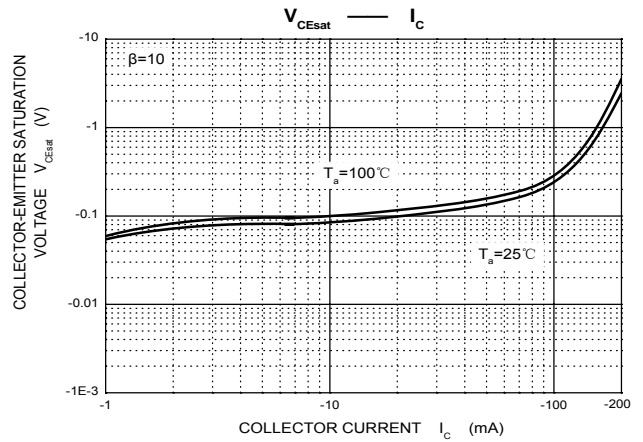
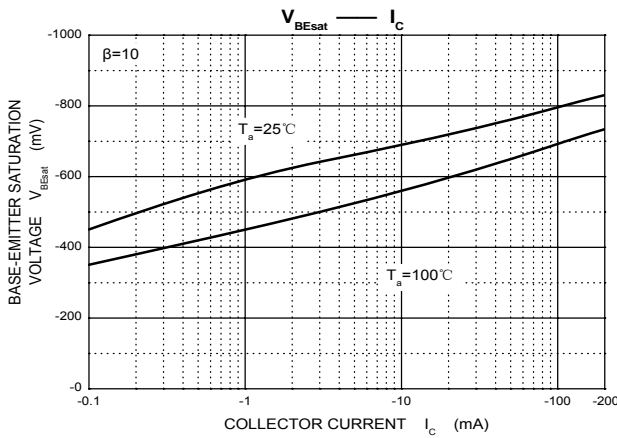
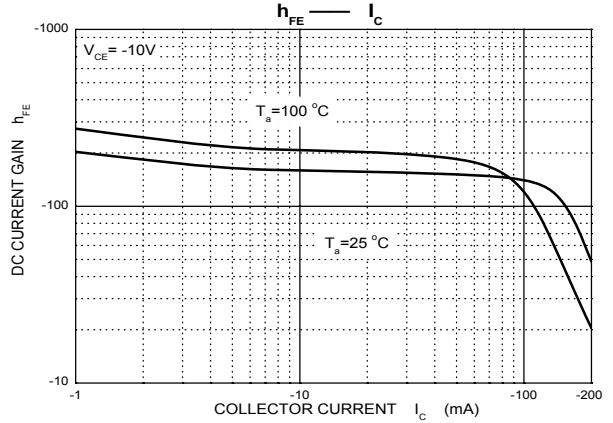
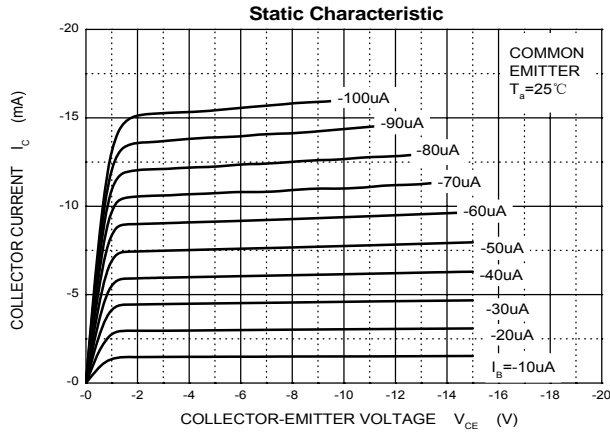
### MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	$V_{CBO}$	-400	V
Collector-Emitter Voltage	$V_{CEO}$	-400	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current-Continuous	$I_C$	-200	mA
Collector Current-Pulsed	$I_{CM}$	-300	mA
Collector Power Dissipation	$P_C$	1	W
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	125	$^\circ\text{C/W}$
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

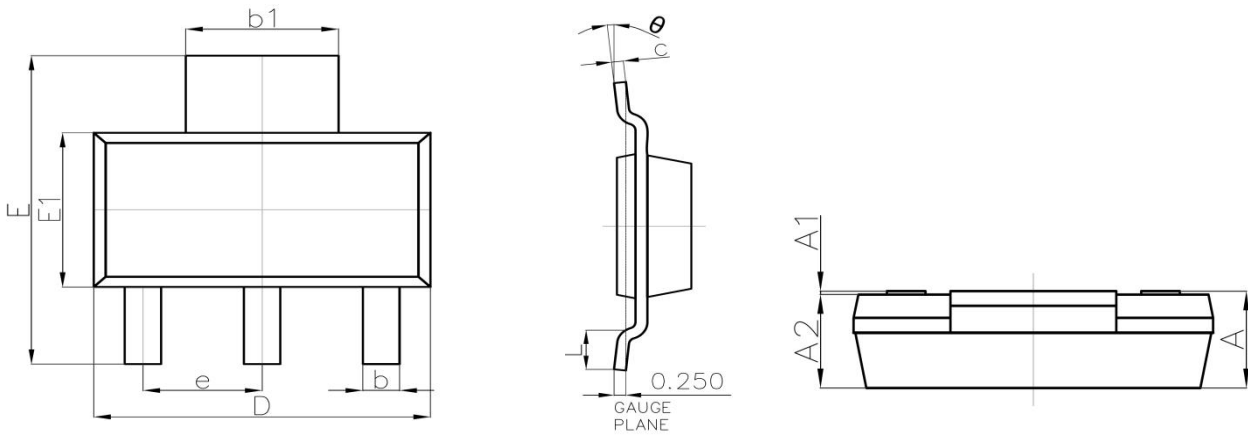
### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	-400			V	$I_C = -100\mu\text{A}$ , $I_E = 0$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	-400			V	$I_C = -1\text{mA}$ , $I_B = 0$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	-5			V	$I_E = -100\mu\text{A}$ , $I_C = 0$
Collector cut-off current	$I_{CBO}$			-0.1	$\mu\text{A}$	$V_{CB} = -400\text{V}$ , $I_E = 0$
Collector cut-off current	$I_{CEO}$			-5	$\mu\text{A}$	$V_{CE} = -400\text{V}$ , $I_E = 0$
Emitter cut-off current	$I_{EBO}$			-0.1	$\mu\text{A}$	$V_{EB} = -4\text{V}$ , $I_C = 0$
DC current gain	$h_{FE}$	80		300		$V_{CE} = -10\text{V}$ , $I_C = -10\text{mA}$
		70				$V_{CE} = -10\text{V}$ , $I_C = -1\text{mA}$
		60				$V_{CE} = -10\text{V}$ , $I_C = -100\text{mA}$
		80				$V_{CE} = -10\text{V}$ , $I_C = -50\text{mA}$
Collector-emitter saturation voltage	$V_{CE(sat)}$			-0.2	V	$I_C = -10\text{mA}$ , $I_B = -1\text{mA}$
				-0.3	V	$I_C = -50\text{mA}$ , $I_B = -5\text{mA}$
Base-emitter saturation voltage	$V_{BE(sat)}$			-0.75	V	$I_C = -10\text{mA}$ , $I_B = -1\text{mA}$
Transition frequency	$f_T$	50			MHz	$V_{CE} = -20\text{V}$ , $I_C = -10\text{mA}$ , $f = 30\text{MHz}$

**Typical Characteristics**

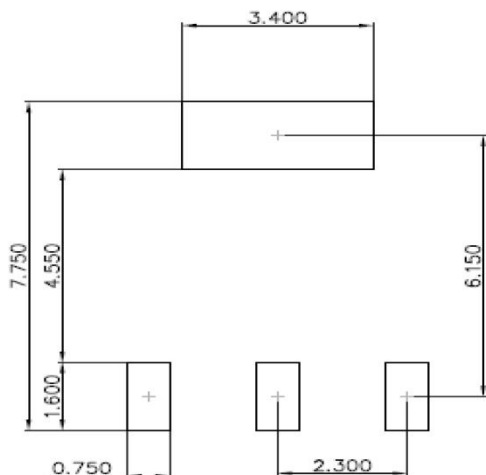


SOT-223 Package Outline Dimensions



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

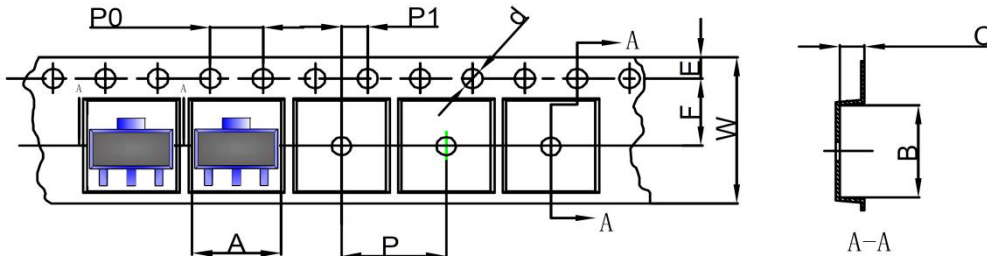


Note:

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

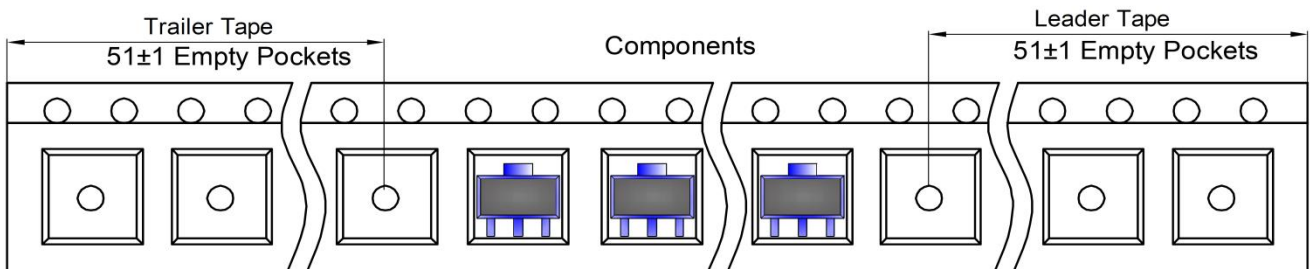
## SOT-223 Tape and Reel

### SOT-223 Embossed Carrier Tape



DIMENSIONS ARE IN MILLIMETER										
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	4.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

### SOT-223 Tape Leader and Trailer



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