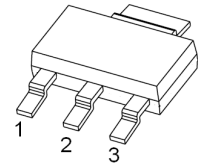


Features

- High voltage
- For high voltage amplifier applications



SOT-223

1. BASE
2. COLLECTOR
3. EMITTER

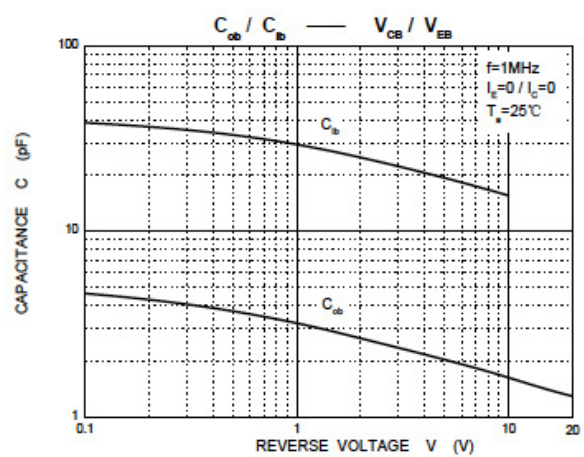
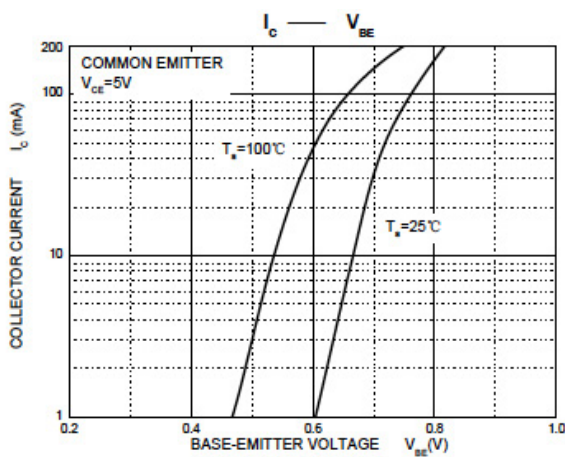
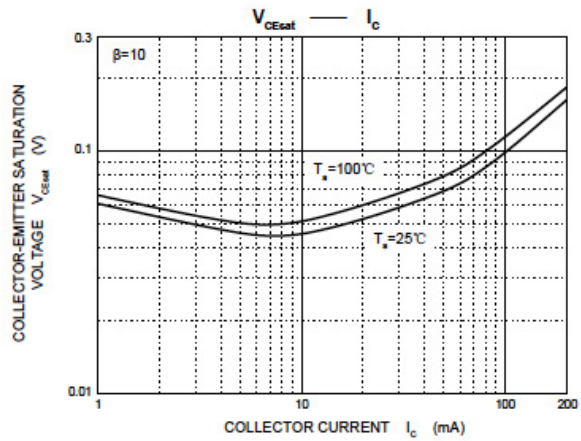
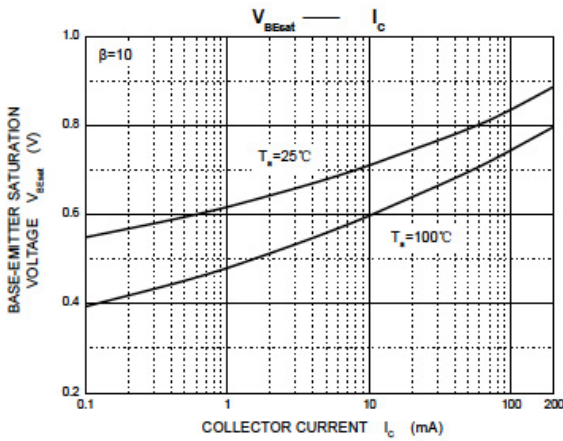
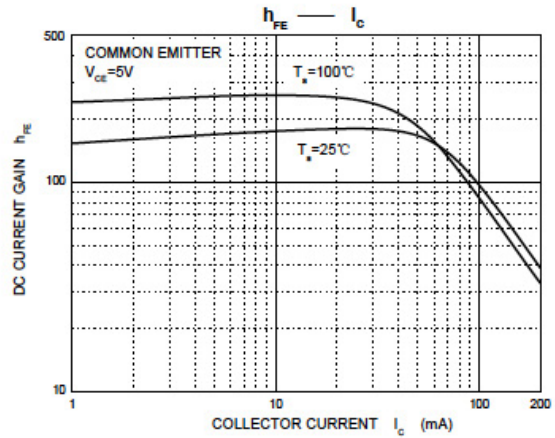
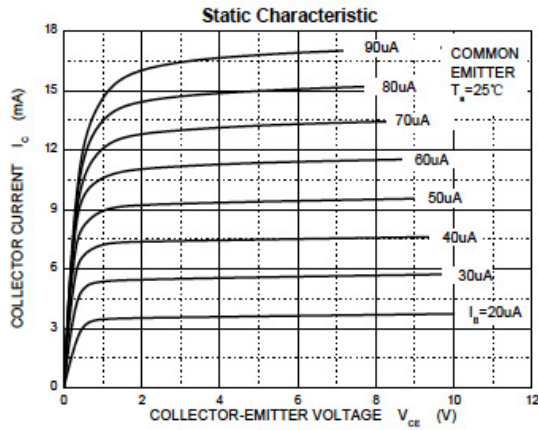
Absolute Maximum Ratings ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

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 Current	I_C	600	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	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 to +150	$^\circ\text{C}$

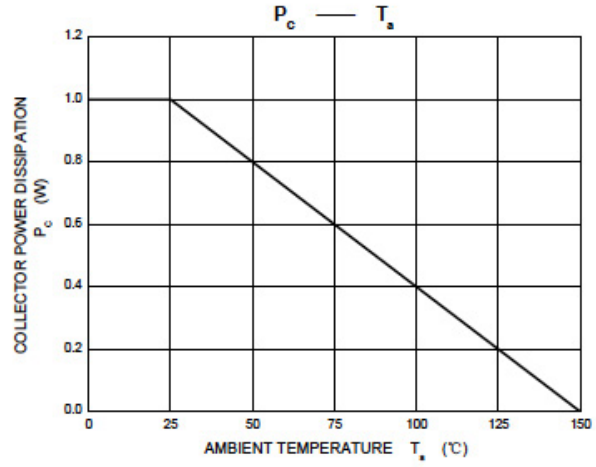
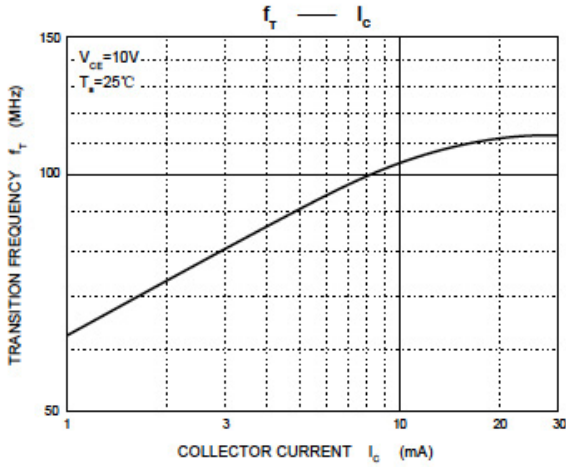
Electrical Characteristics ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test 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	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	160			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=0.01\text{mA}, I_C=0$	6			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=120\text{V}, I_E=0$			50	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			50	nA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5\text{V}, I_C=1\text{mA}$	80			
	$h_{FE(2)}$	$V_{CE}=5\text{V}, I_C=10\text{mA}$	80		250	
	$h_{FE(3)}$	$V_{CE}=5\text{V}, I_C=50\text{mA}$	30			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.15	V
		$I_C=50\text{mA}, I_B=5\text{mA}$			0.2	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			1	V
		$I_C=50\text{mA}, I_B=5\text{mA}$			1	V
Transition Frequency	f_T	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100		300	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			6	pF
Emitter Input Capacitance	C_{ib}	$V_{BE}=0.5\text{V}, I_C=0, f=1\text{MHz}$			20	pF

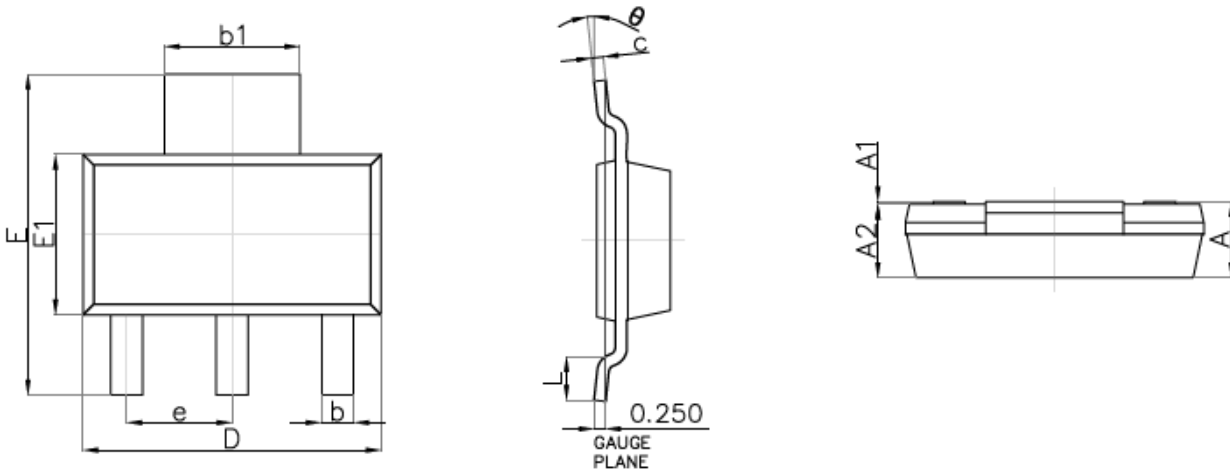
Typical Characteristic Curves



Typical Characteristic Curves

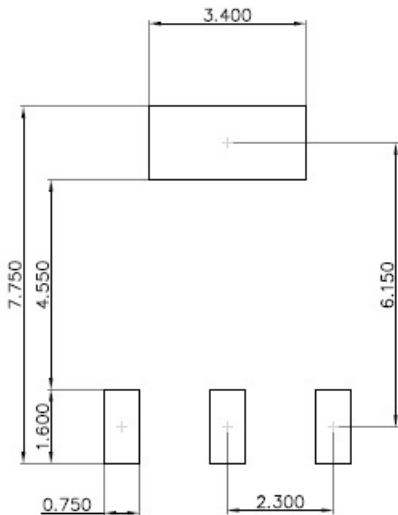


Package Outline Dimensions SOT-223



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°

Suggested Pad Layout



Note:

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

Marking and Ordering Information

Device	Package	Marking	Quantity	HSF Status
PZT5551	SOT-223	ZT5551	1000pcs / Reel	RoHS Compliant