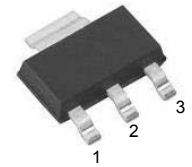


## Features

- Low saturation voltage
- High continuous collector current



**SOT-223**

1. BASE
2. COLLECTOR
3. EMITTER

## Applications

- Switching application
- General-purpose amplifier

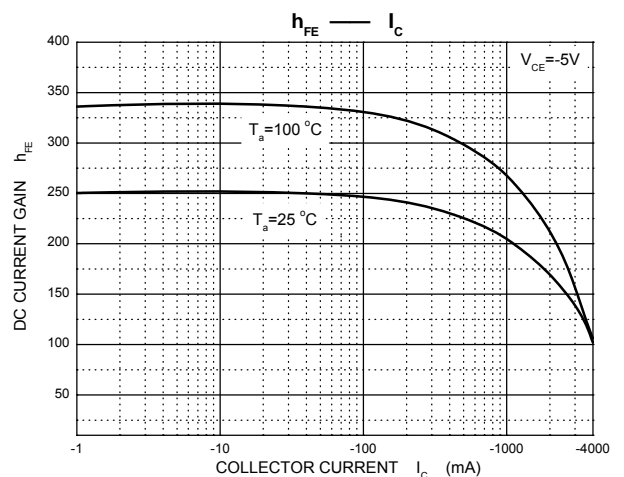
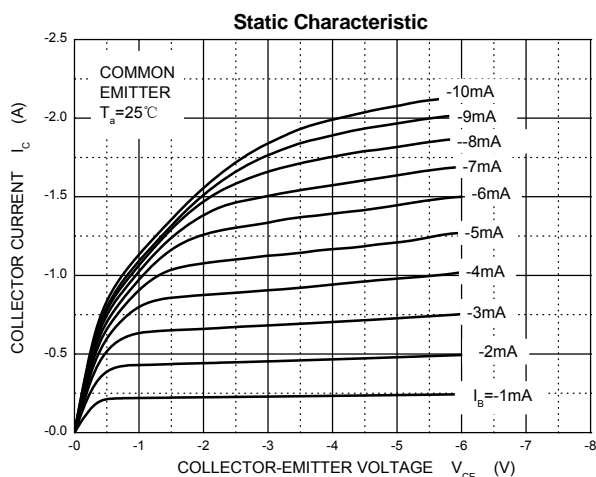
## Absolute Maximum Ratings ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Max.	Unit
Collector-Base Voltage	$V_{CBO}$	-180	V
Collector-Emitter Voltage	$V_{CEO}$	-140	V
Emitter-Base Voltage	$V_{EBO}$	-6	V
Collector Current	$I_C$	-4	A
Collector Power Dissipation	$P_C$	0.8	W
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	156	$^{\circ}\text{C}/\text{W}$
Operating Junction Temperature Range	$T_J$	-55 To +150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 To +150	$^{\circ}\text{C}$

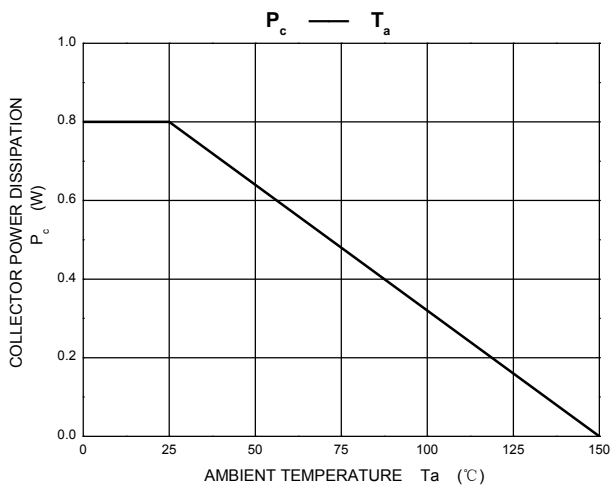
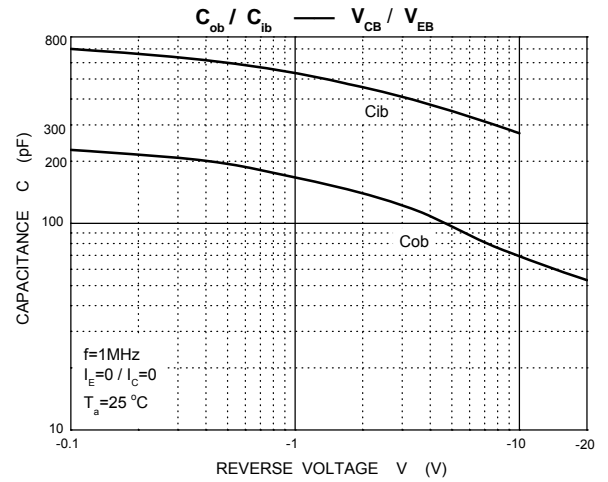
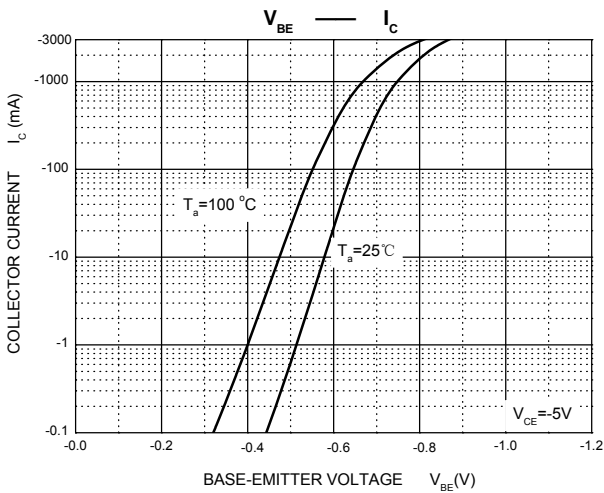
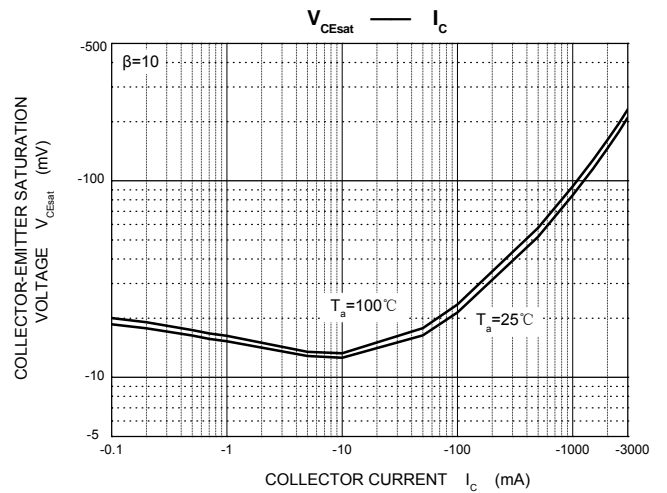
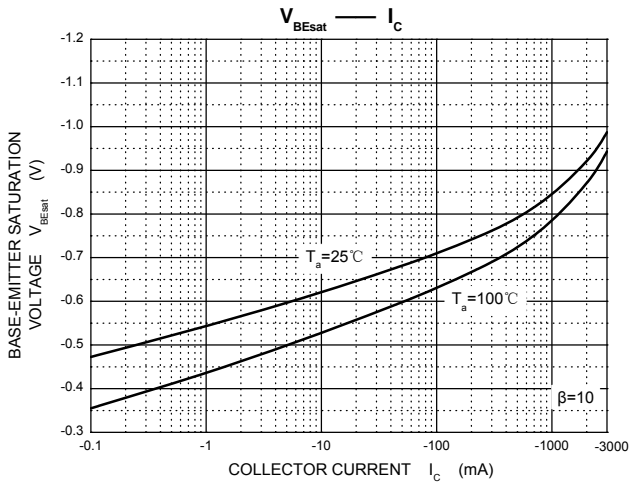
**Electrical Characteristics** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

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
Emitter-Base 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
		$I_C=-500\text{mA}, I_B=-50\text{mA}$	-	-	-120	mV
		$I_C=-1\text{A}, I_B=-100\text{mA}$	-	-	-150	mV
		$I_C=-3\text{A}, I_B=-300\text{mA}$	-	-	-370	mV
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-3\text{A}, I_B=-300\text{mA}$	-	-	-1.11	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE}=-5\text{V}, I_C=-3\text{A}$	-	-	-0.95	V
Transition Frequency	$f_T$	$V_{CE}=-10\text{V}, I_C=-100\text{mA}, f=50\text{MHz}$	-	70	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=-20\text{V}, I_E=0, f=1\text{MHz}$	-	40	-	pF
Switching Times	$t_{on}$	$V_{CC}=-50\text{V}, I_C=-1\text{A}, I_{B1}=I_{B2}=-100\text{mA}$	-	68	-	nS
	$t_{off}$		-	1030	-	nS

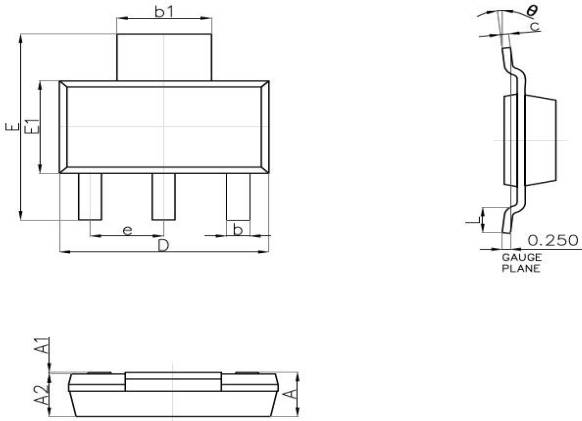
**Typical Electrical Characteristic Curves**



**Typical Electrical Characteristic Curves**

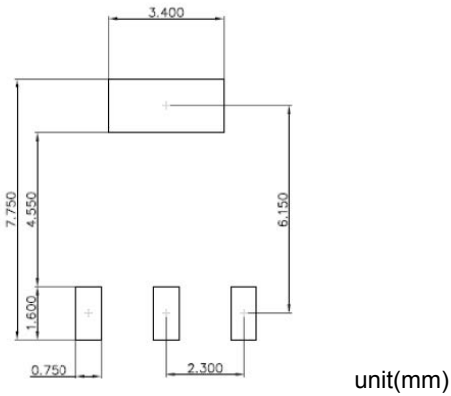


**Package Outline Dimensions (SOT-223)**



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°

**Recommended Pad Layout**



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

**Marking and Ordering Information**

Device	Package	Marking	Quantity	HSF Status
PZT955	SOT-223	ZT955	2500pcs / Reel	RoHS