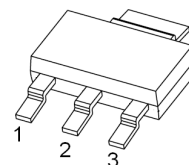


Features

- Low voltage and low current
- Complementary to PZT3906
- General purpose amplifier and switch application



SOT-223

1. BASE
2. COLLECTOR
3. EMITTER

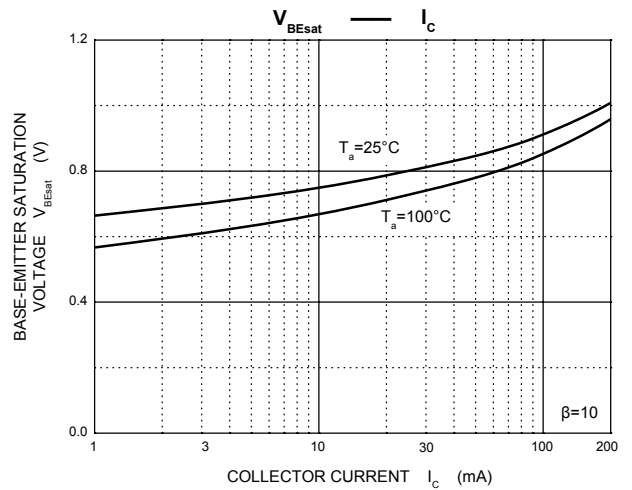
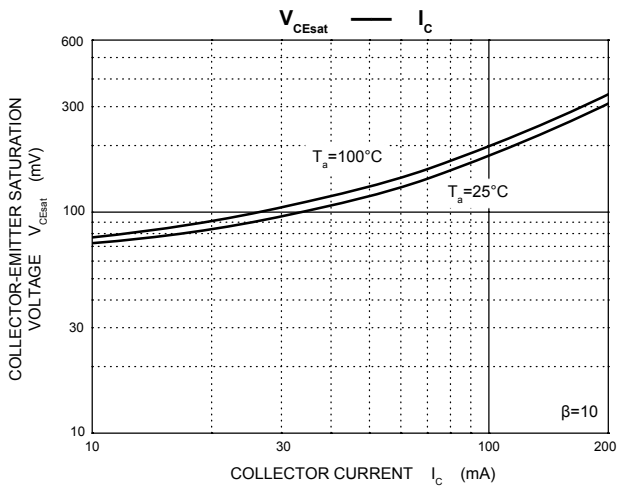
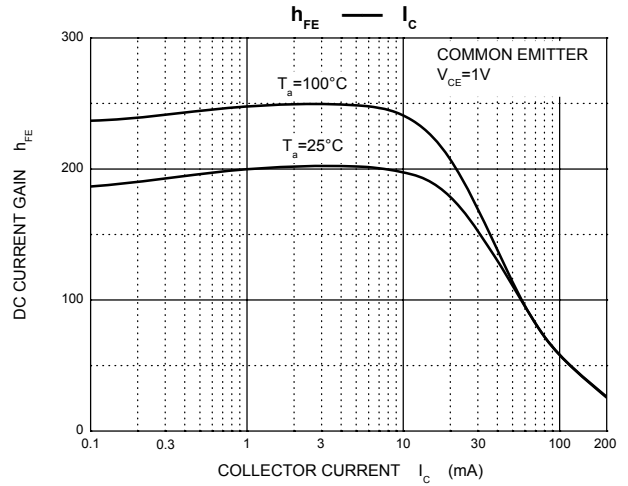
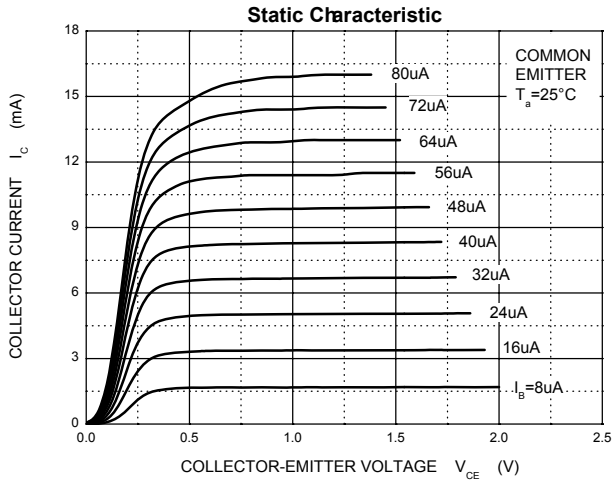
Absolute Maximum Ratings (T_A = 25 °C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	60	V
Collector-Emitter Voltage	V _{CEO}	40	V
Emitter-Base Voltage	V _{EBO}	6	V
Collector Current	I _C	200	mA
Collector Power Dissipation	P _C	1	W
Thermal Resistance from Junction to Ambient	R _{θJA}	125	°C/W
Junction Temperature	T _J	-55 to +150	°C
Storage Temperature	T _{STG}	-55 to +150	°C

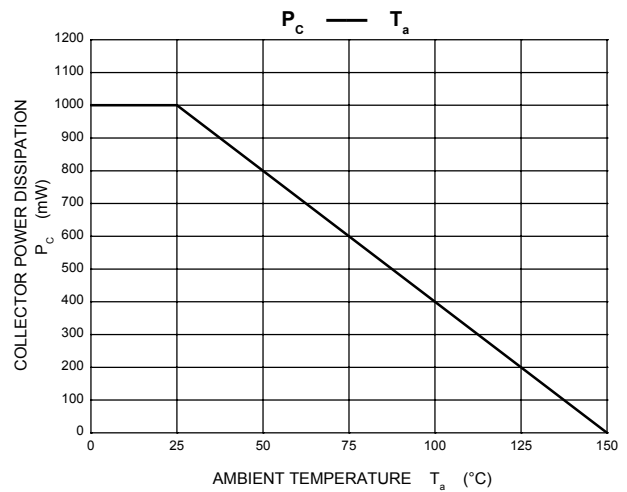
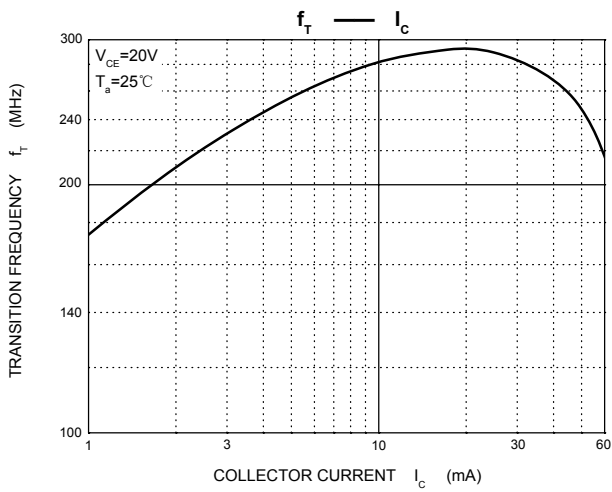
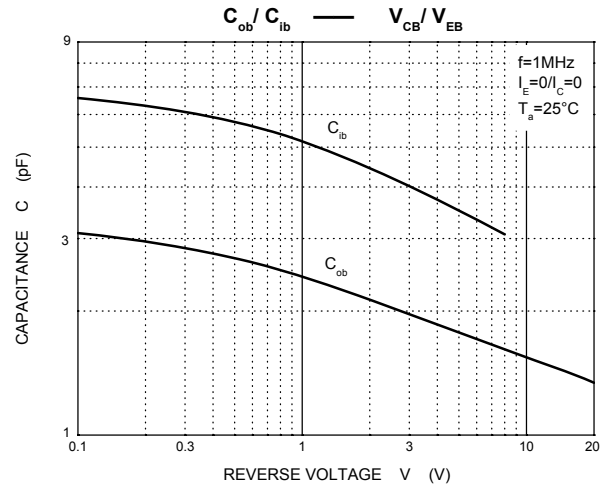
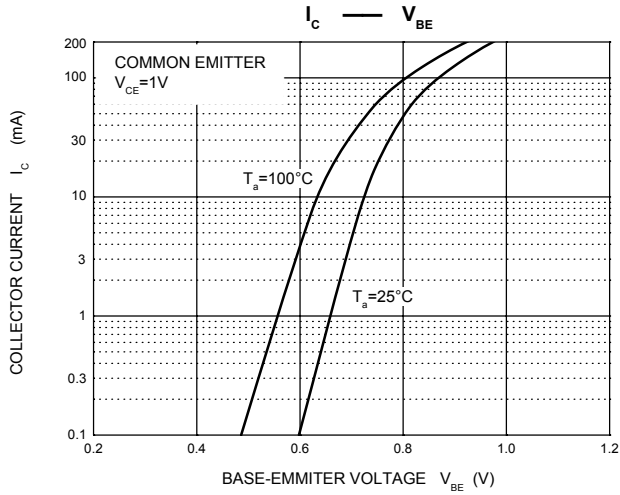
Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Max	Unit
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C =0.01mA, I _E =0	60	-	V
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	40	-	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E =0.01mA, I _C =0	6	-	V
Collector Cut-Off Current	I _{CBO}	V _{CB} =30V, I _E =0	-	50	nA
Collector Cut-Off Current	I _{CEX}	V _{CE} =30V, V _{EB} =3V	-	50	nA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =5V, I _C =0	-	50	nA
DC Current Gain	h _{FE(1)}	V _{CE} =1V, I _C =0.1mA	40	-	-
	h _{FE(2)}	V _{CE} =1V, I _C =1mA	70	-	-
	h _{FE(3)}	V _{CE} =1V, I _C =10mA	100	300	-
	h _{FE(4)}	V _{CE} =1V, I _C =50mA	60	-	-
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =10mA, I _B =1mA	-	0.2	V
		I _C =50mA, I _B =5mA	-	0.3	V
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C =10mA, I _B =1mA	0.65	0.85	V
		I _C =50mA, I _B =5mA	-	0.95	V
Transition Frequency	f _T	V _{CE} =20V, I _C =10mA, f=100MHz	300	-	MHz
Output Capacitance	C _{ob}	V _{CB} =5V, I _E =0, f=1MHz	-	4	pF
Delay Time	t _d	V _{CC} =3V, V _{BE(off)} =0.5V, I _C =10mA, I _{B1} =-I _{B2} =1mA	-	35	nS
Rise Time	t _r		-	35	
Storage Time	t _s	V _{CC} =3V, I _C =10mA, I _{B1} =-I _{B2} =1mA	-	200	nS
Fall Time	t _f		-	50	

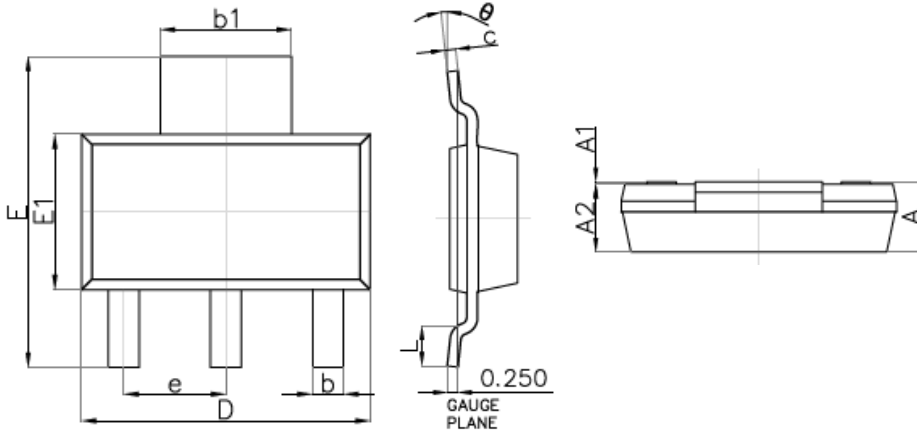
Typical Characteristic Curves



Typical Characteristic Curves

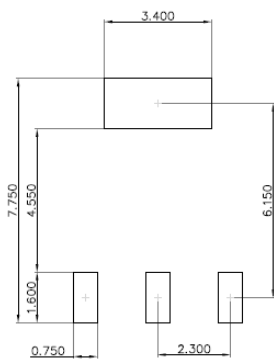


Package Outline Dimensions SOT-223



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: ±0.050mm.
3. The pad layout is for reference purposes only.

Ordering Information

Device	Package	Marking	Quantity	HSF Status
PZT3904	SOT-223	ZT3904	1000pcs / Reel	RoHS Compliant