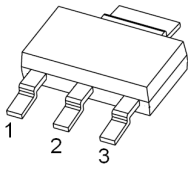
GOOD-ARK
SEMICONDUCTOR

PZT2222A
NPN Transistor

Features

- Epitaxial planar die construction
- Complementary PNP type available (PZT2907A)



SOT-223

1. BASE
2. COLLECTOR
3. EMITTER

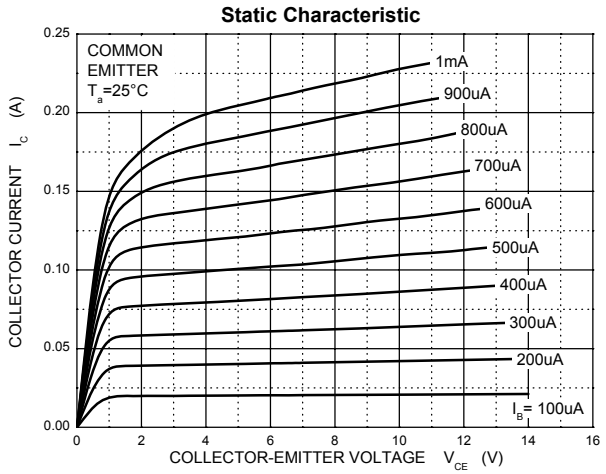
Absolute Maximum Ratings (T_A = 25 °C unless otherwise noted)

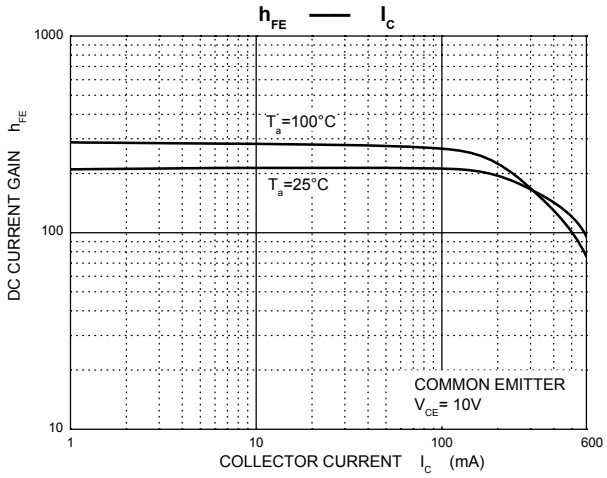
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	75	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current - Continuous	I_C	600	mA
Collector Power Dissipation	P_C	1	W
Junction Temperature	T_J	-55 to +150	℃
Storage Temperature	T_{STG}	-55 to +150	℃

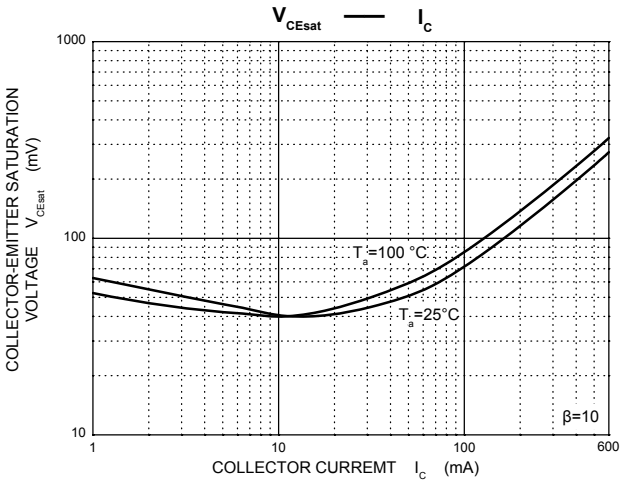
Electrical Characteristics (T_A = 25 °C unless otherwise noted)

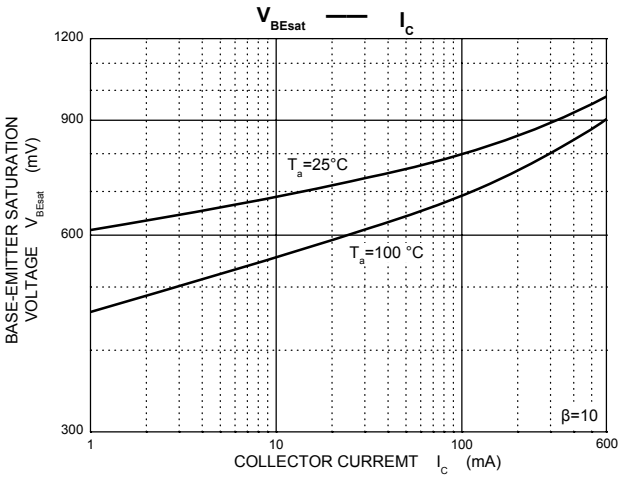
Parameter	Symbol	Test Conditions	Min	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C= 10μ A,I_E=0	75	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C= 10mA, I_B=0	40	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	6	-	V
Collector Cut-Off Current	I_{CBO}	V_{CB}=60V, I_E=0	-	10	nA
Collector Cut-Off Current	I_{CEX}	V_{CE}=60V,$V_{BE(off)}$=3V	-	10	nA
Emitter Cut-Off Current	I_{EBO}	V_{EB}= 3V , I_C=0	-	10	nA
DC Current Gain	$h_{FE(1)}$	V_{CE}=10V, I_C= 0.1mA	35	-	-
	$h_{FE(2)}$	V_{CE}=10V, I_C= 1mA	50	-	-
	$h_{FE(3)}$	V_{CE}=10V, I_C= 10mA	75	-	-
	$h_{FE(4)}$	V_{CE}=10V, I_C= 150mA	100	300	-
	$h_{FE(5)}$	V_{CE}=1V, I_C= 150mA	50	-	-
	$h_{FE(6)}$	V_{CE}=10V, I_C= 500mA	40	-	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=500mA, I_B= 50mA	-	1	V
	$V_{CE(sat)}$	I_C=150mA, I_B= 15mA	-	0.3	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=500mA, I_B= 50mA	-	2.0	V
	$V_{BE(sat)}$	I_C=150mA, I_B=15mA	-	1.2	V
Transition Frequency	f_T	V_{CE}=20V,I_C= 20mA, f=100MHz	300	-	MHz
Output Capacitance	C_{ob}	V_{CB}=10V, I_E= 0,f=1MHz	-	8	pF
Delay Time	t_d	V_{CC}=30V, I_C=150mA $V_{BE(off)}$=0.5V,I_{B1}=15mA	-	10	nS
Rise Time	t_r		-	25	nS
Storage Time	t_S	V_{CC}=30V, I_C=150mA I_{B1}=-I_{B2}= 15mA	-	225	nS
Fall Time	t_f		-	60	nS

Typical Characteristic Curves

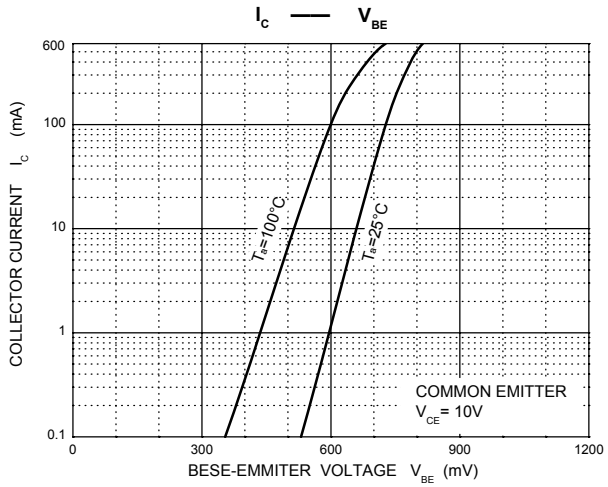


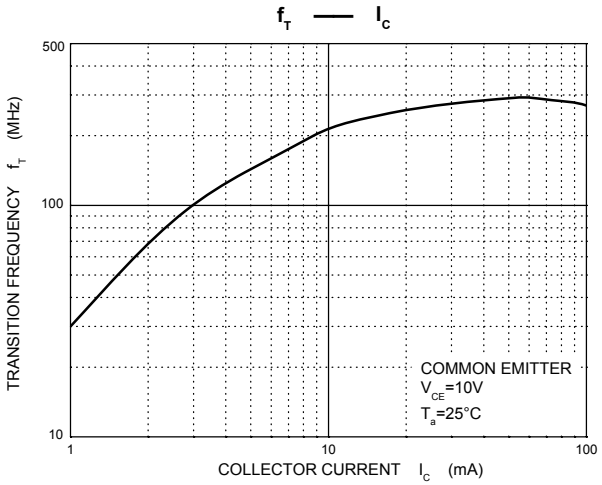


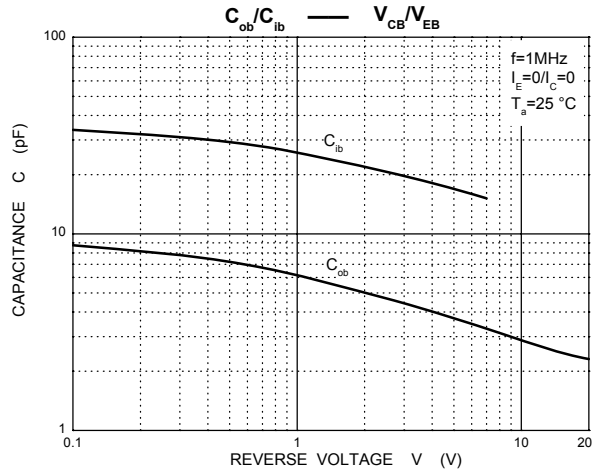


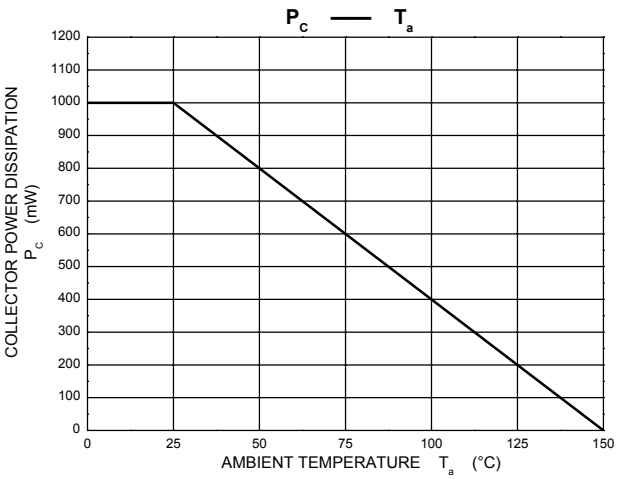


Typical Characteristic Curves

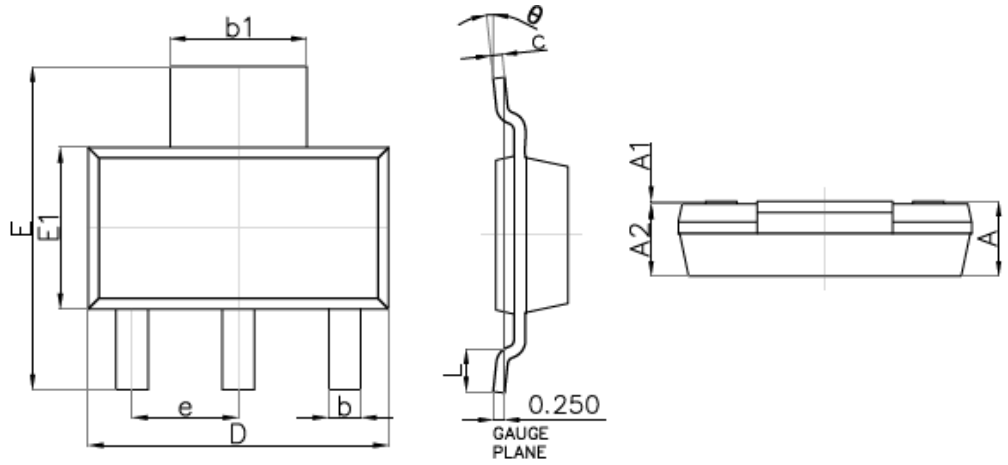






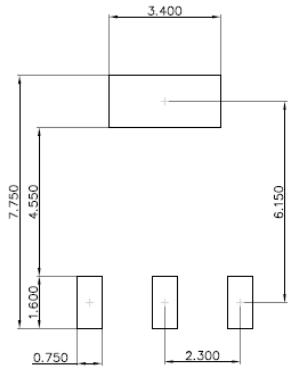


Package Outline Dimensions SOT-223



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
PZT2222A	SOT-223	ZT2222A	2,500pcs / Reel	RoHS Compliant