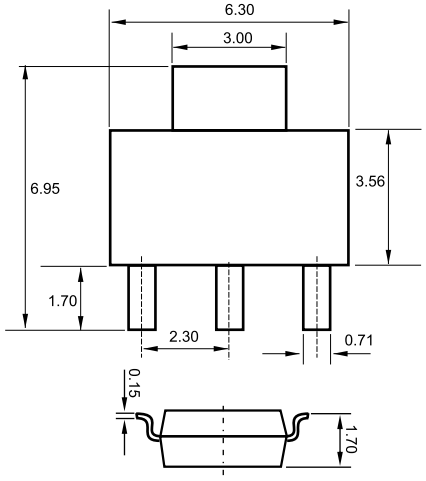
PZT2222A

SOT-223 Transistor(NPN)

1. BASE
2. COLLECTOR
3. EMITTER

SOT-223



Dimensions in inches and (millimeters)

Features

- ✧ Epitaxial planar die construction
- ✧ Complementary PNP Type available (PZT2907A)

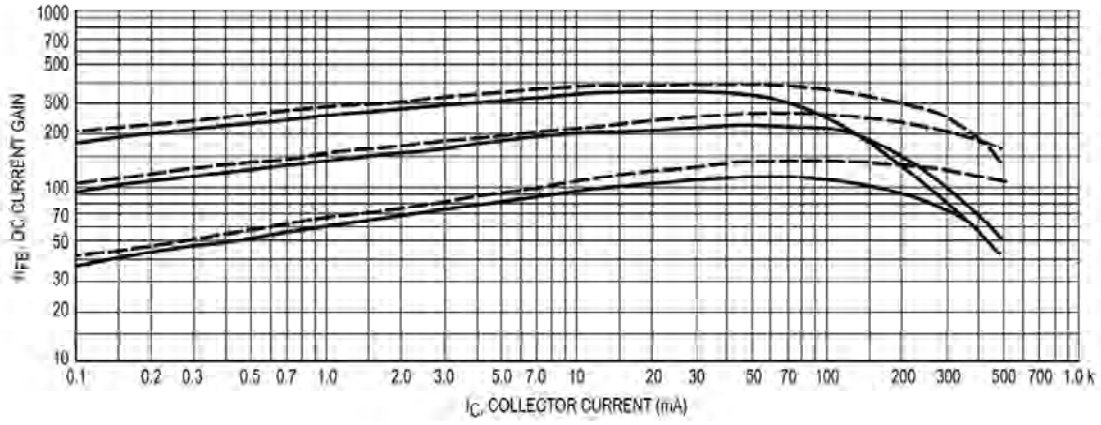
MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

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

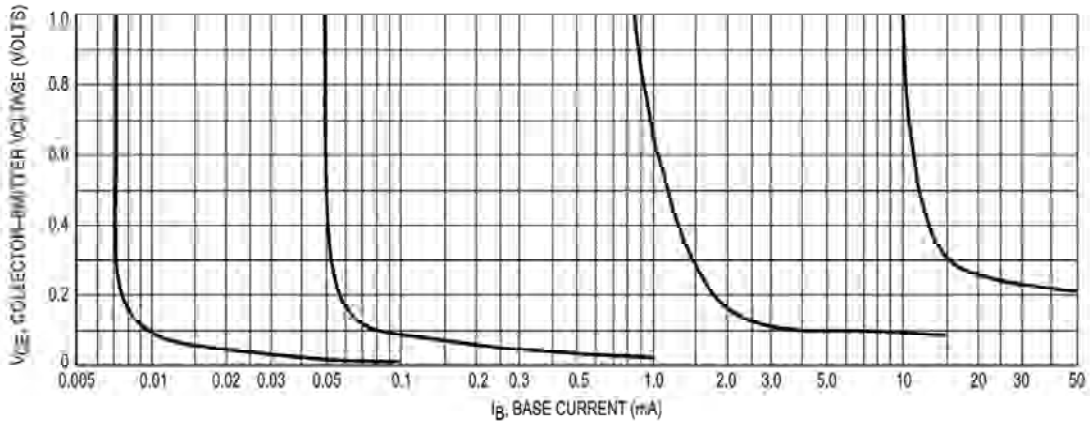
ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

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

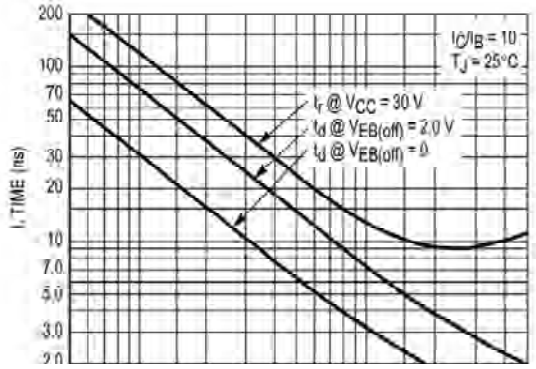
Typical characteristics

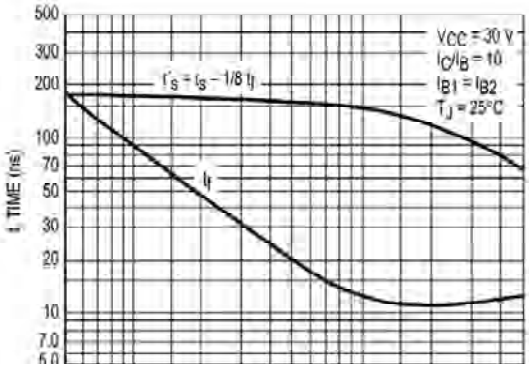


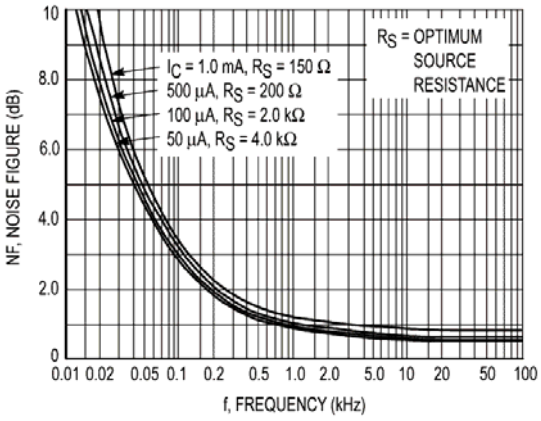
DC Current Gain



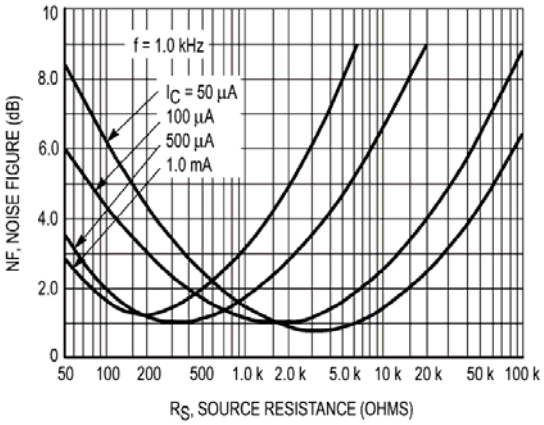
Collector Saturation Region



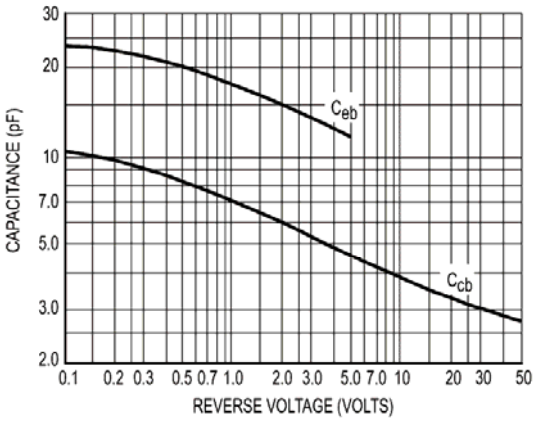




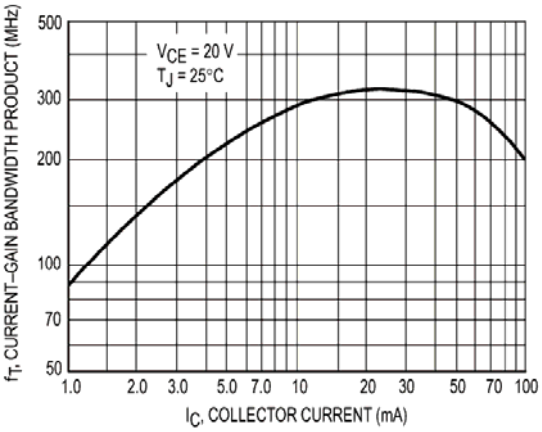
Frequency Effects



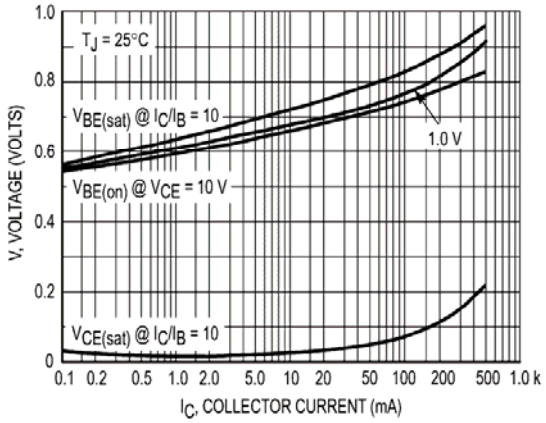
Source Resistance Effects



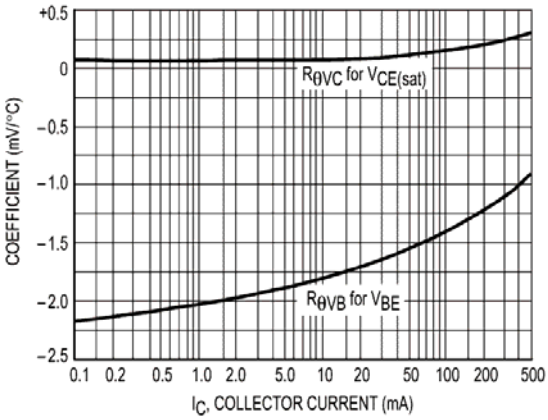
Capacitances



Current–Gain Bandwidth Product



"On" Voltages



Temperature Coefficients