DESCRIPTION

The PZT2222A is available in SOT-223 package

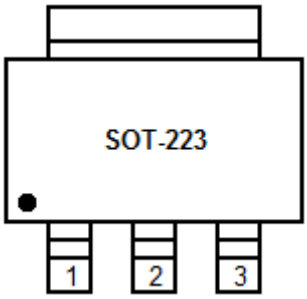
FEATURES

- Power Dissipation
  P_{CM}: 1W (Tamb=25°C)
- Collector Current
  I_{CM}: 0.6A
- Collector-Base Voltage
  $V_{(BR)CBO}$: 75V
- Operating and Storage Junction Temperature Range
  T_J, T_{STG}: -55°C to 150°C
- Available in SOT-223 package

ORDERING INFORMATION

Package Type	Part Number
SOT-223	PZT2222A
Note	SPQ: 1,000pcs/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION



1. BASE
2. COLLECTOR
3. EMITTER

ELECTRICAL CHARACTERISTICS

T_{amb}=25°C, unless otherwise specified

Parameter	Symbol	Conditions	Min.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=10μA, 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	6.0		V
Collector Cut-Off Current	I_{CBO}	V_{CB}=60V, I_E=0		0.01	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=3.0V, I_C=0		0.01	μA
DC Current Gain	$h_{FE(1)}$	I_C=0.1mA, V_{CE}=10V	35		-
	$h_{FE(2)}$	I_C=1.0mA, V_{CE}=10V	50		-
	$h_{FE(3)}$	I_C=10mA, V_{CE}=10V	75		-
	$h_{FE(4)}$	I_C=150mA, V_{CE}=10V	100	300	-
	$h_{FE(5)}$	I_C=150mA, V_{CE}=1.0V	50		-
	$h_{FE(6)}$	I_C=500mA, V_{CE}=10V	40		-
Collector- Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=500mA, I_B=50mA		1.0	V
		I_C=150mA, I_B=15mA		0.3	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=500mA, I_B=50mA		2.0	V
		I_C=150mA, I_B=15mA	0.6	1.2	
Transition Frequency	f_T	I_C=20mA, V_{CE}=20V, f=100MHz	300		MHz
Output Capacitance	C_{ob}	I_E=0, V_{CB}=10V, f=1MHz		8	pF
Delay Time	t_d	V_{CC}=30V, I_C=150mA		10	nS
Rise Time	t_r	$V_{BE(off)}$=0.5V, I_{B1}=15mA		25	nS
Storage Time	t_s	V_{CC}=30V, I_C=150mA,		225	nS
Fall Time	t_f	I_{B1}= I_{B2}=15mA		60	nS

SWITCHING TIME EQUIVALENT TEST CIRCUITS

Figure. 1 Turn-on Time

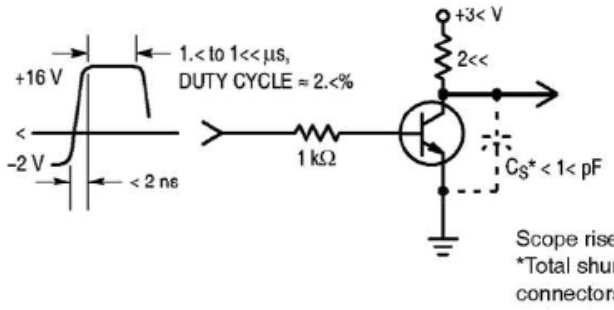
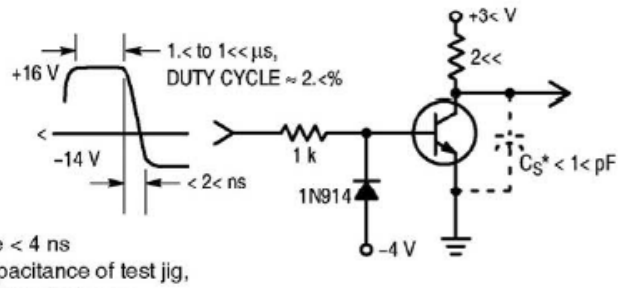


Figure. 2 Turn-off Time



Scope rise time < 4 ns
*Total shunt capacitance of test jig, connectors, and oscilloscope.

Figure. 3 DC Current Gain

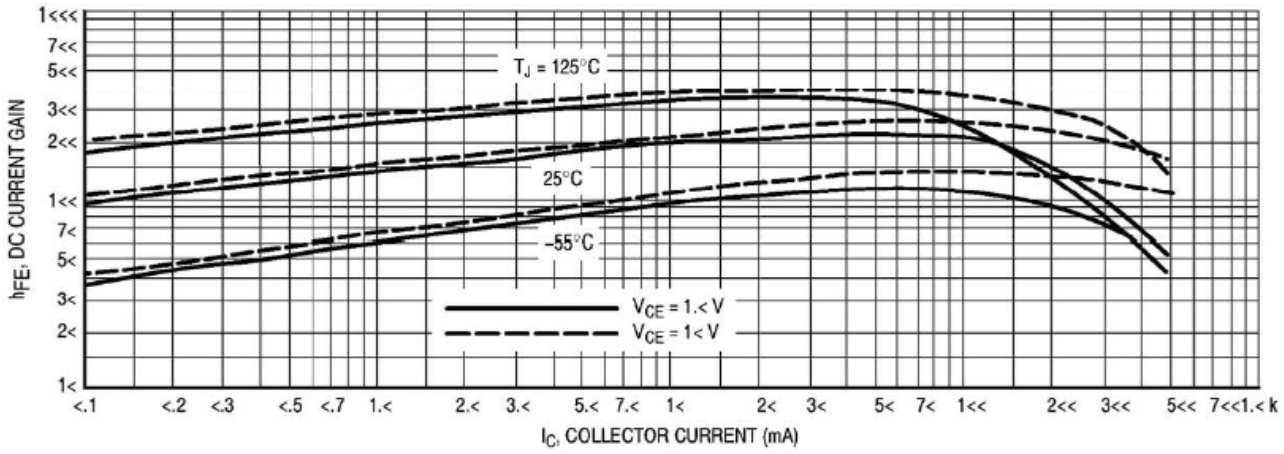


Figure. 4 Collector Saturation Region

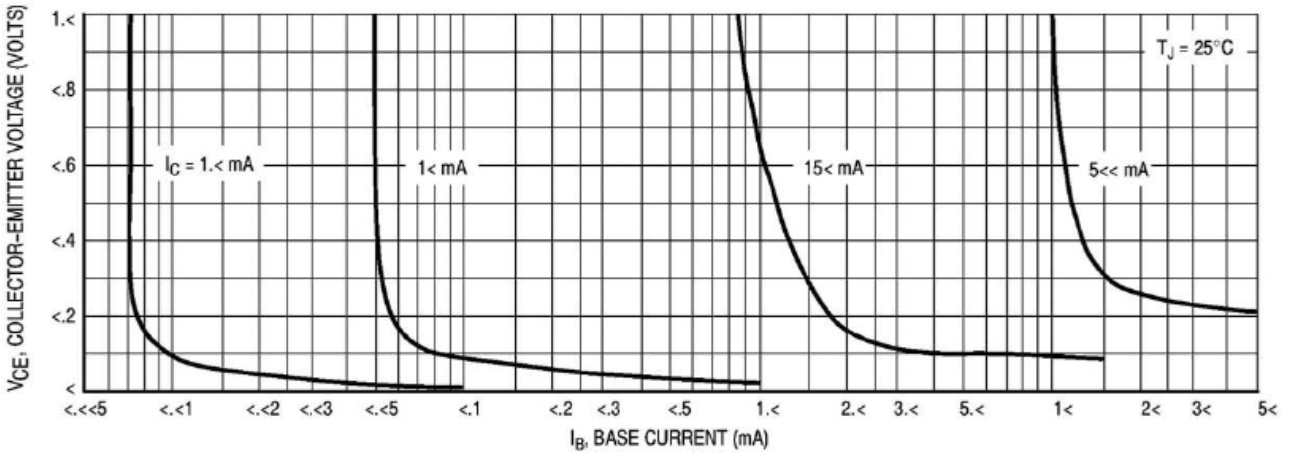


Figure. 5 Turn-on Time

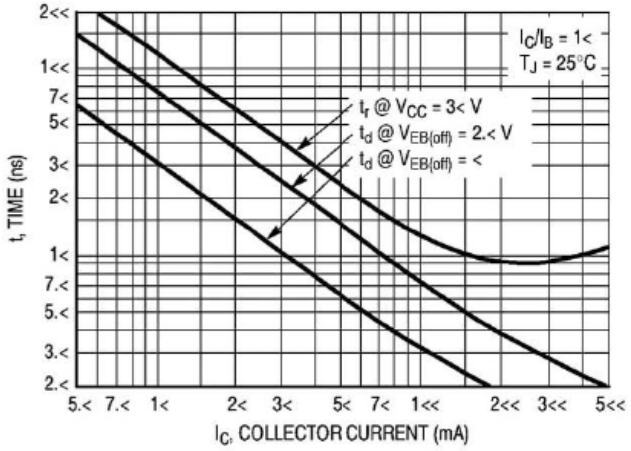


Figure. 6 Turn-off Time

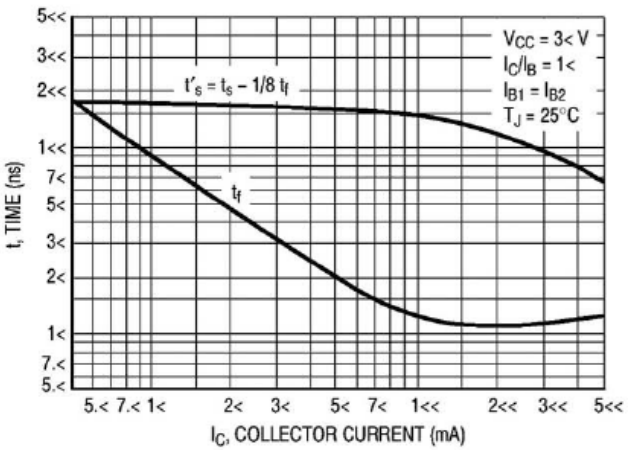


Figure. 7 Frequency Effects

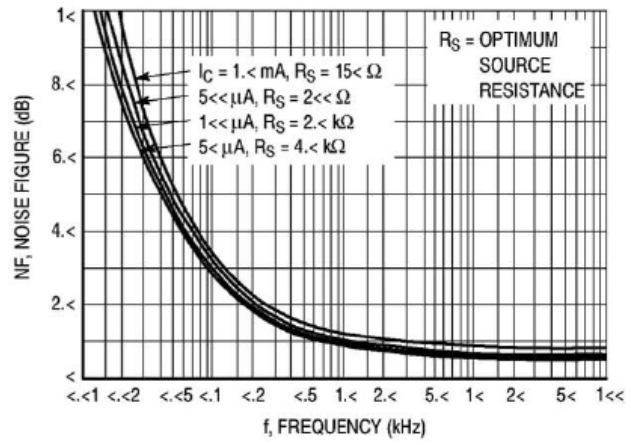


Figure. 8 Source Resistance Effects

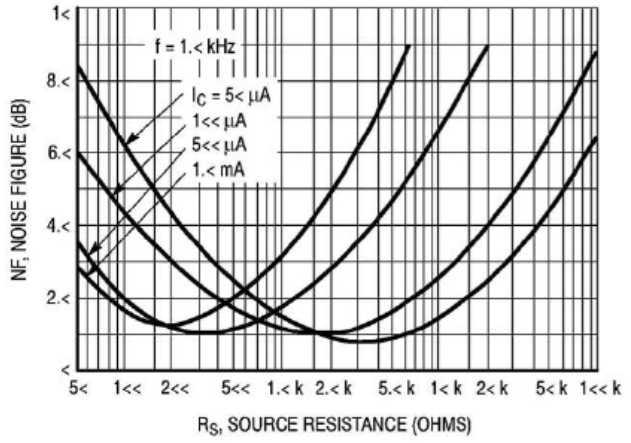


Figure. 9 Capacitances

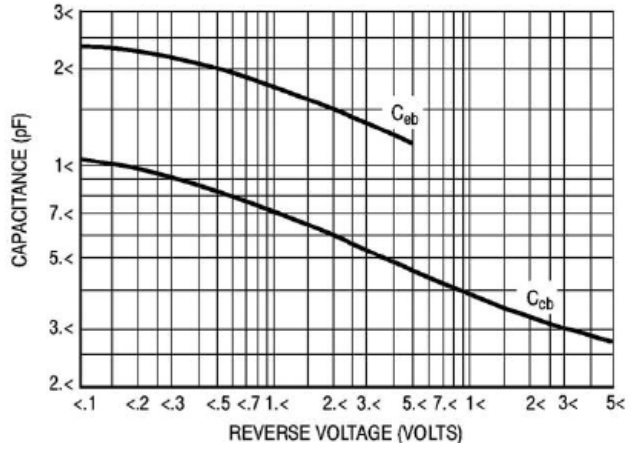


Figure. 10 Current-Gain Bandwidth Product

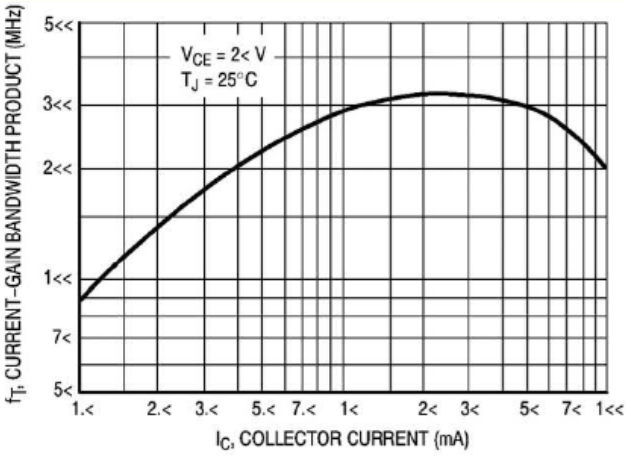
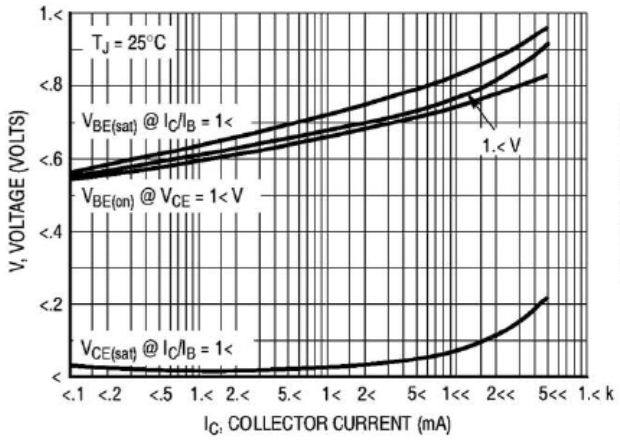
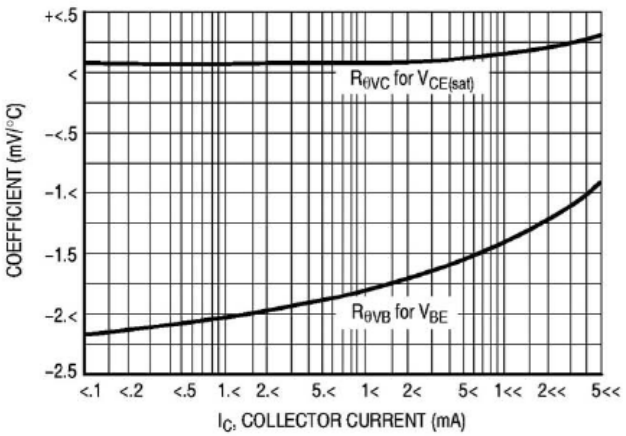


Figure. 11 “On” Voltages

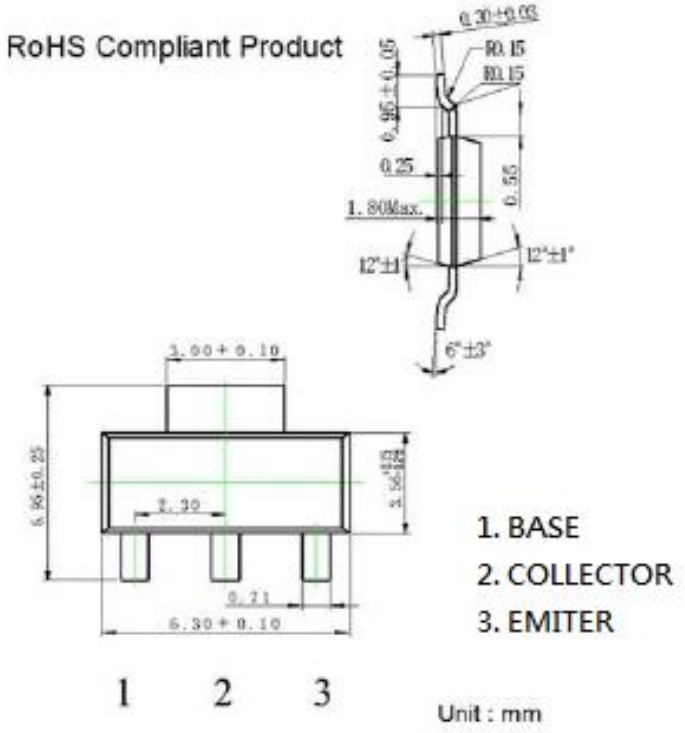
Figure. 12 Temperature Coefficients





PACKAGE INFORMATION

Dimension in SOT-223 (Unit: mm)



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