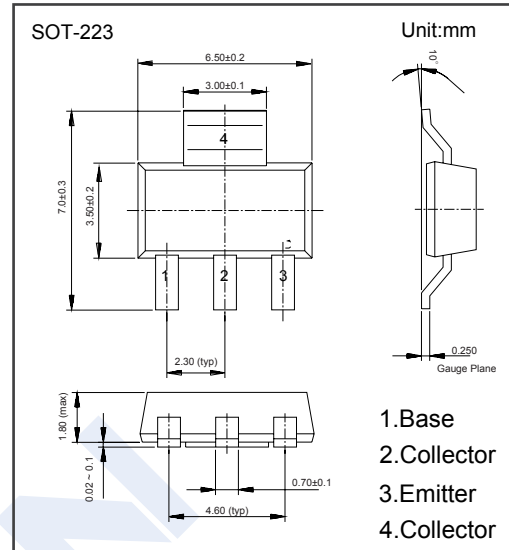


NPN Transistors

PZT3904 (KZT3904)

■ Features

- Low Voltage and Low Current
- General Purpose Amplifier and Switch Application
- Complementary to PZT3906



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V _{CB0}	60	V
Collector - Emitter Voltage	V _{CE0}	40	
Emitter - Base Voltage	V _{EB0}	6	
Collector Current - Continuous	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	150	°C
Storage Temperature Range	T _{stg}	-55 to 150	

NPN Transistors

PZT3904 (KZT3904)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CBO}	I _C = 100 μA, I _E = 0	60			V
Collector- emitter breakdown voltage	V _{CEO}	I _C = 1 mA, I _B = 0	40			
Emitter - base breakdown voltage	V _{EBO}	I _E = 100 μA, I _C = 0	6			
Collector-base cut-off current	I _{CBO}	V _{CB} = 60 V, I _E = 0			100	nA
Collector cut-off current	I _{CEX}	V _{CE} = 30 V, V _{BE(off)} =-3V			50	
Emitter cut-off current	I _{EBO}	V _{EB} = 6V, I _C =0			100	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =10 mA, I _B =1mA			0.2	V
		I _C = 50 mA, I _B = 5mA			0.3	
Base - emitter saturation voltage	V _{BE(sat)}	I _C =10 mA, I _B =1mA	0.65		0.85	
		I _C = 50 mA, I _B = 5mA			0.95	
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			
Delay time	t _d	V _{CC} =3V, V _{BE(off)} =-0.5V			35	nS
Rise time	t _r	I _C =10mA, I _{B1} =-I _{B2} =1mA			35	
Storage time	t _s	V _{CC} =3V, I _C =10mA, I _{B1} =-I _{B2} =1mA			200	
Fall time	t _f				50	
Collector output capacitance	C _{ob}	V _{CB} = 5V, I _E = 0, f=1MHz			4	pF
Transition frequency	f _T	V _{CE} = 20V, I _C = 10mA, f=100MHz	300			MHz