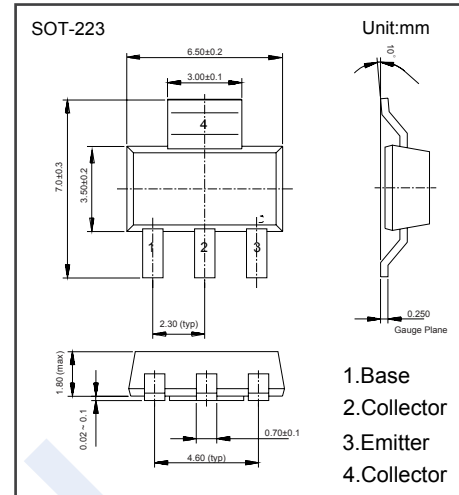


NPN Transistors

PZTA42 (KZTA42)

■ Features

- High breakdown voltage
- Low collector-emitter saturation voltage
- Complementary to PZTA92

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	300	V
Collector - Emitter Voltage	V_{CE0}	300	
Emitter - Base Voltage	V_{EB0}	6	
Collector Current - Continuous	I_C	200	mA
Collector Current - Pulse	I_{CP}	500	
Collector Power Dissipation	P_C	1	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = 100 \mu\text{A}$, $I_E = 0$	300			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 1 \text{ mA}$, $I_B = 0$	300			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100 \mu\text{A}$, $I_C = 0$	6			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 200 \text{ V}$, $I_E = 0$			100	nA
Emitter cut-off current	I_{EB0}	$V_{EB} = 6 \text{ V}$, $I_C = 0$			100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 20 \text{ mA}$, $I_B = 2 \text{ mA}$			0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 20 \text{ mA}$, $I_B = 2 \text{ mA}$			0.9	
DC current gain	$h_{FE(1)}$	$V_{CE} = 10 \text{ V}$, $I_C = 1 \text{ mA}$	25			
	$h_{FE(2)}$	$V_{CE} = 10 \text{ V}$, $I_C = 10 \text{ mA}$	40			
	$h_{FE(3)}$	$V_{CE} = 10 \text{ V}$, $I_C = 30 \text{ mA}$	40			
Collector output capacitance	C_{ob}	$V_{CB} = 20 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$			3	pF
Transition frequency	f_T	$V_{CE} = 20 \text{ V}$, $I_C = 10 \text{ mA}$, $f = 100 \text{ MHz}$	50			MHz