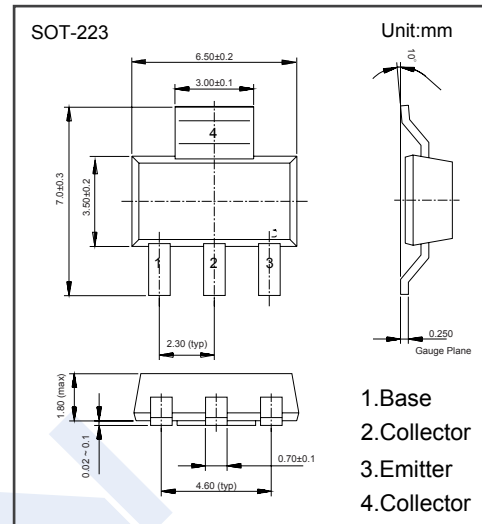


NPN Transistors

FZT1048A (KZT1048A)

■ Features

- Collector Current Capability $I_C=5A$
- Collector Emitter Voltage $V_{CE0}=17.5V$
- Low Saturation Voltage



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	50	V
Collector - Emitter Voltage	V_{CEO}	17.5	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	5	A
Collector Current - Pulse	I_{CP}	20	
Base Current	I_B	500	mA
Collector Power Dissipation	P_C	2.5	W
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

NPN Transistors

FZT1048A (KZT1048A)

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = 100 \mu\text{A}$, $I_E = 0$	50			V
Collector- emitter breakdown voltage	V_{CES}	$I_C = 100 \mu\text{A}$, $I_B = 0$	50			
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 10 \text{ mA}$, $I_B = 0$	17.5			
Collector- emitter breakdown voltage	V_{CEV}	$I_C = 100 \mu\text{A}$, $V_{EB} = 1\text{V}$	50			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100 \mu\text{A}$, $I_C = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 35 \text{ V}$, $I_E = 0$			10	nA
Collector-emitter cut-off current	I_{CES}	$V_{CE} = 35 \text{ V}$, $I_B = 0$			10	
Emitter cut-off current	I_{EBO}	$V_{EB} = 4 \text{ V}$, $I_C = 0$			10	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500 \text{ mA}$, $I_B = 10 \text{ mA}$			45	mV
		$I_C = 1 \text{ A}$, $I_B = 10 \text{ mA}$			75	
		$I_C = 3 \text{ A}$, $I_B = 15 \text{ mA}$			215	
		$I_C = 5 \text{ A}$, $I_B = 25 \text{ mA}$			350	
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 5 \text{ A}$, $I_B = 25 \text{ mA}$			1	V
Base - emitter turn-on voltage	$V_{BE(on)}$	$V_{CE} = 2 \text{ V}$, $I_C = 5 \text{ A}$			0.97	
DC current gain	$h_{FE(1)}$	$V_{CE} = 2 \text{ V}$, $I_C = 10 \text{ mA}$	280			
	$h_{FE(2)}$	$V_{CE} = 2 \text{ V}$, $I_C = 500 \text{ mA}$	300			
	$h_{FE(3)}$	$V_{CE} = 2 \text{ V}$, $I_C = 1 \text{ A}$	300		1200	
	$h_{FE(4)}$	$V_{CE} = 2 \text{ V}$, $I_C = 5 \text{ A}$	180			
	$h_{FE(5)}$	$V_{CE} = 2 \text{ V}$, $I_C = 20 \text{ A}$	50			
Switching Times	t_{on}	$I_C = 4 \text{ A}$, $V_{CC} = 10 \text{ V}$, $I_B = 40 \text{ mA}$		120		ns
	t_{off}			310		
Collector output capacitance	C_{ob}	$V_{CB} = 10 \text{ V}$, $f = 1 \text{ MHz}$			80	pF
Transition frequency	f_T	$V_{CE} = 10 \text{ V}$, $I_C = 50 \text{ mA}$, $f = 50 \text{ MHz}$		150		MHz

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■ Typical Characteristics

