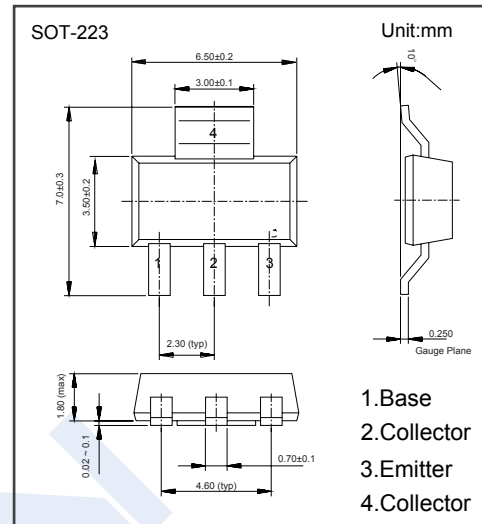


## NPN Transistors

### 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 Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V <sub>CB0</sub>	I <sub>C</sub> = 100 μA, I <sub>E</sub> = 0	50			V
Collector- emitter breakdown voltage	V <sub>CES</sub>	I <sub>C</sub> = 100 μA, I <sub>B</sub> = 0	50			
Collector- emitter breakdown voltage	V <sub>CEO</sub>	I <sub>C</sub> = 10 mA, I <sub>B</sub> = 0	17.5			
Collector- emitter breakdown voltage	V <sub>CEV</sub>	I <sub>C</sub> = 100 μA, V <sub>EB</sub> = 1V	50			
Emitter - base breakdown voltage	V <sub>EBO</sub>	I <sub>E</sub> = 100 μA, I <sub>C</sub> = 0	5			
Collector-base cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = 35 V, I <sub>E</sub> = 0			10	nA
Collector-emitter cut-off current	I <sub>CES</sub>	V <sub>CE</sub> = 35 V, I <sub>B</sub> = 0			10	
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 4V, I <sub>C</sub> =0			10	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =10mA			45	mV
		I <sub>C</sub> =1 A, I <sub>B</sub> =10mA			75	
		I <sub>C</sub> =3 A, I <sub>B</sub> =15mA			215	
		I <sub>C</sub> =5 A, I <sub>B</sub> =25mA			350	
Base - emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =5 A, I <sub>B</sub> =25mA			1	V
Base - emitter turn-on voltage	V <sub>BE(on)</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> = 5A			0.97	
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> = 10mA	280			
	h <sub>FE(2)</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> = 500mA	300			
	h <sub>FE(3)</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> = 1 A	300		1200	
	h <sub>FE(4)</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> = 5 A	180			
	h <sub>FE(5)</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> = 20 A	50			
Switching Times	t <sub>on</sub>	I <sub>C</sub> =4 A, V <sub>CC</sub> =10V, I <sub>B</sub> =40mA		120		ns
	t <sub>off</sub>			310		
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10V, f=1MHz			80	pF
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 50mA, f=50MHz		150		MHz

## NPN Transistors

### FZT1048A (KZT1048A)

■ Typical Characteristics

