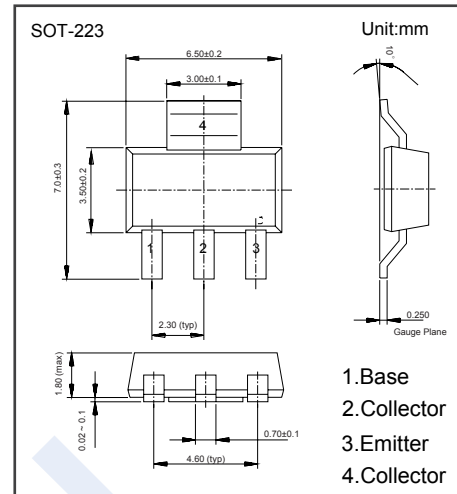


NPN Transistors

FZT489 (KZT489)

■ Features

- Collector Current Capability $I_C=1A$
- Collector Emitter Voltage $V_{CEO}=30V$
- Complementary to FZT589

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	50	V
Collector - Emitter Voltage	V_{CEO}	30	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	1	A
Collector Current - Pulse	I_{CP}	4	
Base Current	I_B	200	mA
Collector Power Dissipation	P_C	2	W
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = 100 \mu A, I_E = 0$	50			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 10 mA, I_B = 0$	30			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100 \mu A, I_C = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 30 V, I_E = 0$			100	nA
Collector- emitter cut-off current	I_{CES}	$V_{CES} = 30 V$			100	
Emitter cut-off current	I_{EBO}	$V_{EB} = 4 V, I_C = 0$			100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1 A, I_B = 100 mA$ (Note.1)			0.3	V
		$I_C = 2 A, I_B = 200 mA$ (Note.1)			0.6	
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1 A, I_B = 100 mA$ (Note.1)			1.1	
Base-Emitter Turn On Voltage	$V_{BE(on)}$	$V_{CE} = 2 V, I_C = 1 A$ (Note.1)			1	
DC current gain (Note.1)	$h_{FE(1)}$	$V_{CE} = 2 V, I_C = 1 mA$	100			
	$h_{FE(2)}$	$V_{CE} = 2 V, I_C = 1 A$	100		300	
	$h_{FE(3)}$	$V_{CE} = 2 V, I_C = 2 A$	60			
	$h_{FE(4)}$	$V_{CE} = 2 V, I_C = 4 A$	20			
Collector output capacitance	C_{ob}	$V_{CB} = 10 V, f = 1 MHz$			10	pF
Transition frequency	f_T	$V_{CE} = 10 V, I_C = 50 mA, f = 100 MHz$	150			MHz

Note.1: Pulse width=300us. Duty cycle $\leq 2\%$