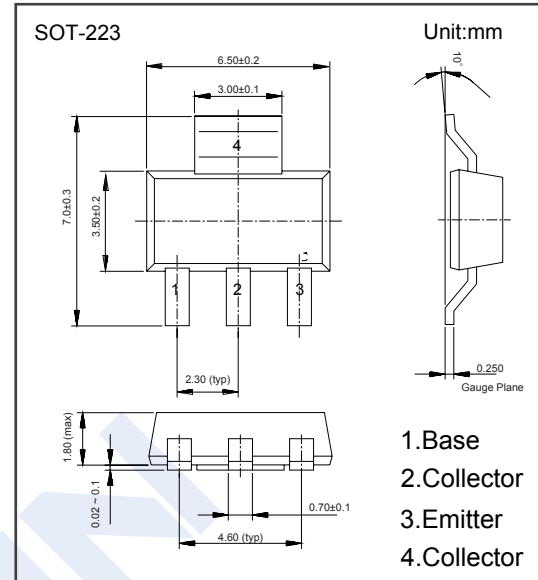


## PNP Transistors

## FZT949 (KZT949)

## ■ Features

- Collector Current Capability  $I_C = -5.5A$
- Collector Emitter Voltage  $V_{CE0} = -30V$
- Complementary to FZT849

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	-50	V
Collector - Emitter Voltage	$V_{CE0}$	-30	
Emitter - Base Voltage	$V_{EB0}$	-6	
Collector Current - Continuous	$I_C$	-5.5	A
Collector Current - Pulse	$I_{CP}$	-20	
Collector Power Dissipation	$P_C$	3	W
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature range	$T_{stg}$	-55 to 150	

## PNP Transistors

## FZT949 (KZT949)

## ■ Electrical Characteristics Ta = 25°C

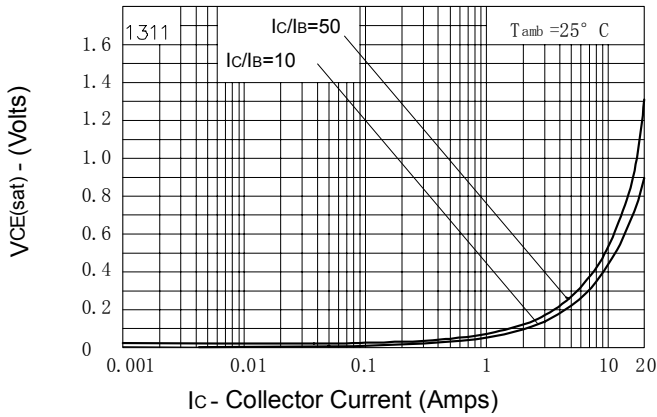
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V <sub>CB0</sub>	I <sub>c</sub> = -100 μA, I <sub>E</sub> =0	-50			V
Collector- emitter breakdown voltage	V <sub>CER</sub>	I <sub>c</sub> = -1μA, R <sub>B</sub> ≤1KΩ	-50			
	V <sub>CEO</sub>	I <sub>c</sub> = -10 mA, I <sub>B</sub> =0	-30			
Emitter - base breakdown voltage	V <sub>EBO</sub>	I <sub>E</sub> = -100 μA, I <sub>c</sub> =0	-6			
Collector-base cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = -40 V, I <sub>E</sub> =0			-50	nA
		V <sub>CB</sub> = -40 V, I <sub>E</sub> =0, Ta = 100°C			-1	μA
Collector-emitter cut-off current (R≤1KΩ)	I <sub>CER</sub>	V <sub>CB</sub> = -40 V, I <sub>E</sub> =0			-50	nA
		V <sub>CB</sub> = -40 V, I <sub>E</sub> =0, Ta = 100°C			-1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = -6V, I <sub>c</sub> =0			-100	nA
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> =-500mA, I <sub>B</sub> =-10mA (Note.1)			-75	mV
		I <sub>c</sub> =-1 A, I <sub>B</sub> =-20mA (Note.1)			-140	
		I <sub>c</sub> =-2 A, I <sub>B</sub> = -200mA (Note.1)			-270	
		I <sub>c</sub> =-5.5 A, I <sub>B</sub> =-500mA (Note.1)			-440	
Base - emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>c</sub> =-5.5 A, I <sub>B</sub> =-500mA (Note.1)			-1.25	V
Base-Emitter Turn-On Voltage	V <sub>BE(on)</sub>	V <sub>CE</sub> = -1V, I <sub>c</sub> = -5.5A (Note.1)			-1.06	
DC current gain (Note.1)	h <sub>FE(1)</sub>	V <sub>CE</sub> = -1V, I <sub>c</sub> = -10mA	100			
	h <sub>FE(2)</sub>	V <sub>CE</sub> = -1V, I <sub>c</sub> = -1A	100		300	
	h <sub>FE(3)</sub>	V <sub>CE</sub> = -1V, I <sub>c</sub> = -5 A	75			
	h <sub>FE(4)</sub>	V <sub>CE</sub> = -2V, I <sub>c</sub> = -20 A		35		
Switching Times	t <sub>on</sub>	I <sub>c</sub> =-4 A, I <sub>B1</sub> =-400mA		120		ns
	t <sub>off</sub>	I <sub>B2</sub> =400mA, V <sub>CC</sub> =-10V		130		
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -10V, f=1MHz		122		pF
Transition frequency	f <sub>r</sub>	V <sub>CE</sub> = -10V, I <sub>c</sub> = -100mA, f=50MHz		100		MHz

Note.1: Pulse width=300 us. Duty cycle ≤ 2%

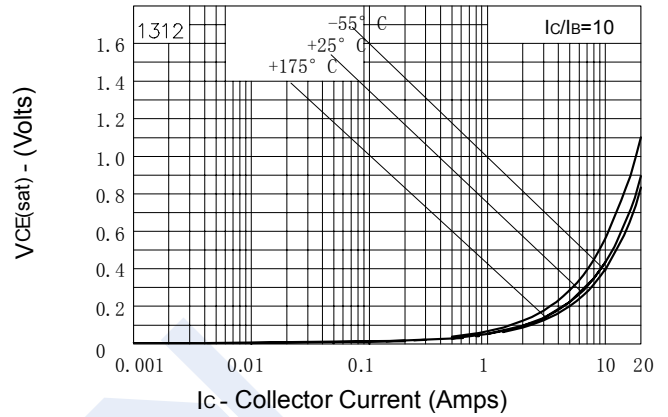
### PNP Transistors

### FZT949 (KZT949)

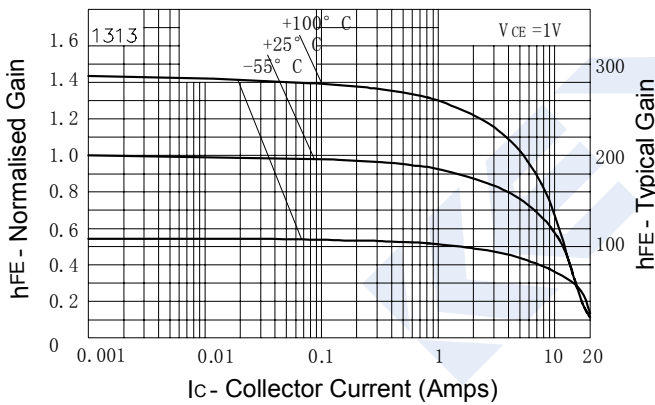
■ Typical Characteristics



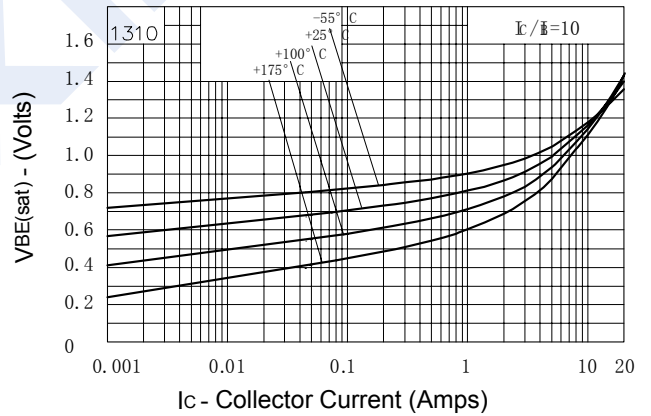
$V_{CE(sat)}$  v  $I_C$



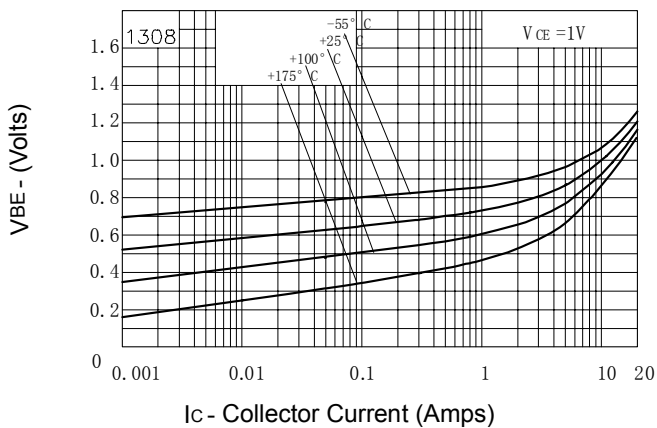
$V_{CE(sat)}$  v  $I_C$



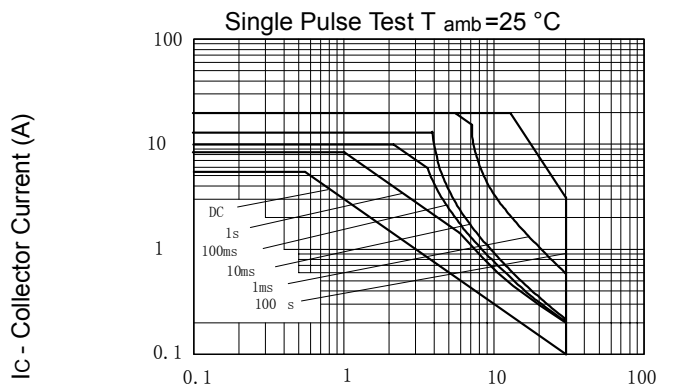
$h_{FE}$  v  $I_C$



$V_{BE(sat)}$  v  $I_C$



$V_{BE(on)}$  v  $I_C$



$V_{ce}$  - Collector Voltage (V)

Safe Operating Area