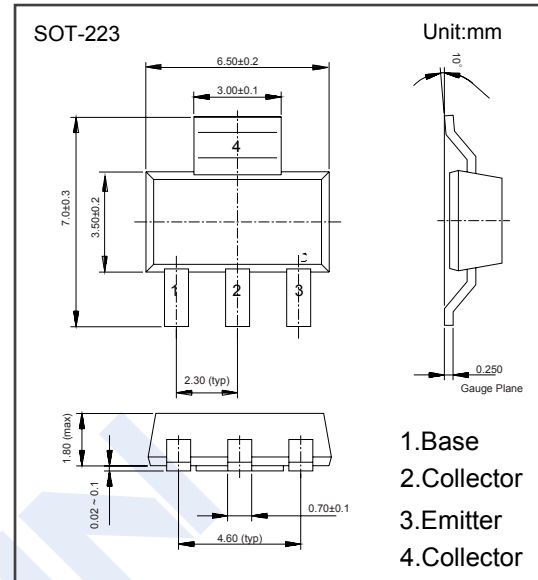


NPN Transistors

FZT851 (KZT851)

■ Features

- Collector Current Capability $I_C=6A$
- Collector Emitter Voltage $V_{CE0}=60V$
- Complementary to FZT951

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	150	V
Collector - Emitter Voltage	V_{CE0}	60	
Emitter - Base Voltage	V_{EB0}	6	
Collector Current - Continuous	I_C	6	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	

NPN Transistors

FZT851 (KZT851)

■ Electrical Characteristics Ta = 25°C

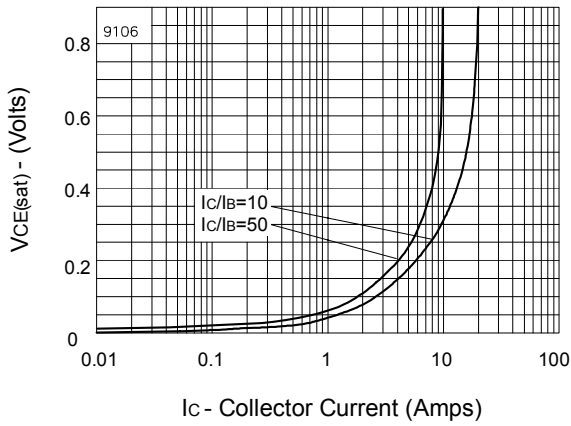
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _C = 100 μA, I _E = 0	150			V
Collector-emitter breakdown voltage	V _{CER}	I _C =1mA, R _B ≤1kΩ	150			
Collector- emitter breakdown voltage	V _{CEO}	I _C = 10 mA, I _B = 0	60			
Emitter - base breakdown voltage	V _{EBO}	I _E = 100 μA, I _C = 0	6			
Collector-base cut-off current	I _{CB0}	V _{CB} = 120 V, I _E = 0			0.1	μA
		V _{CB} = 120 V, I _E = 0, Ta = 100°C			1	
Collector- emitter cut-off current R _B ≤1kΩ	I _{CER}	V _{CB} = 120 V, I _E = 0			0.1	
		V _{CB} = 120 V, I _E = 0, Ta = 100°C			1	
Emitter cut-off current	I _{EBO}	V _{EB} = 6V, I _C =0			0.1	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =0.1 A, I _B =5mA (Note.1)			50	mV
		I _C =1 A, I _B =50mA (Note.1)			100	
		I _C =2 A, I _B =50mA (Note.1)			170	
		I _C =6 A, I _B =300mA (Note.1)			375	
Base - emitter saturation voltage	V _{BE(sat)}	I _C =6 A, I _B =300mA (Note.1)			1.2	V
Base-Emitter Turn On Voltage	V _{BE(on)}	V _{CE} = 6V, I _C = 1A (Note.1)			1.15	
DC current gain (Note.1)	h _{FE(1)}	V _{CE} = 1V, I _C = 10mA	100		300	
	h _{FE(2)}	V _{CE} = 1V, I _C = 2A	100		300	
	h _{FE(3)}	V _{CE} = 1V, I _C = 5A	75			
	h _{FE(4)}	V _{CE} = 1V, I _C = 10A	25			
Switching Times	t _{on}	I _C =1A, I _{B1} =100mA		45		ns
	t _{off}	I _{B2} =100mA, V _{CC} =10V		1100		
Collector output capacitance	C _{ob}	V _{CB} = 10V, f=1MHz		45		pF
Transition frequency	f _T	V _{CE} = 10V, I _C = 100mA, f=50MHz		130		MHz

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

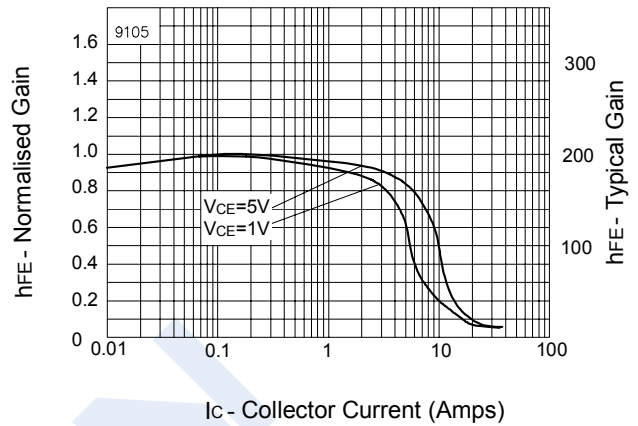
NPN Transistors

FZT851 (KZT851)

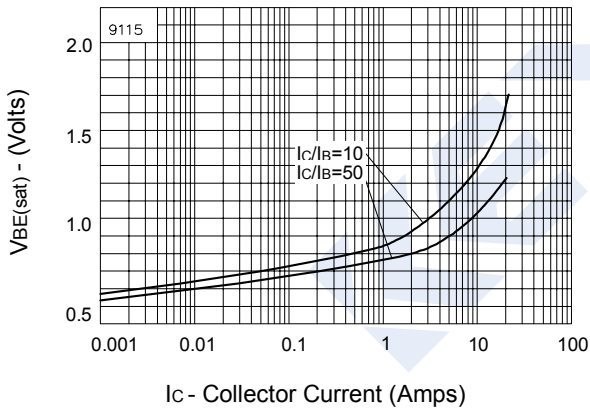
■ Typical Characteristics



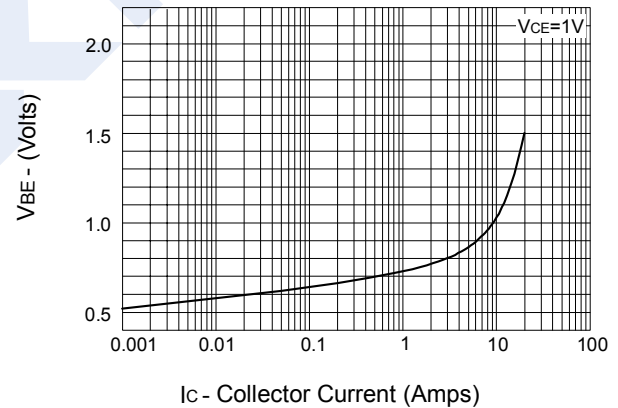
VCE(sat) v IC



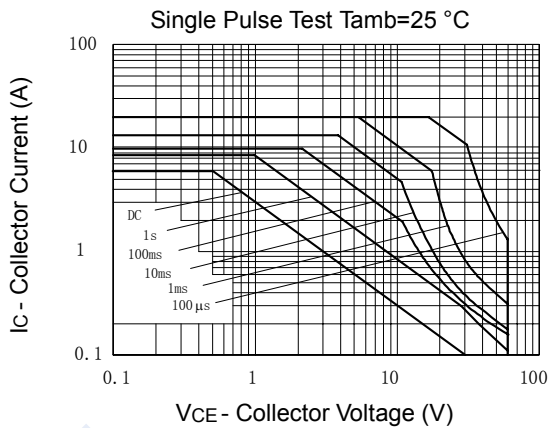
hFE v IC



VBE(sat) v IC



VBE(on) v IC



Safe Operating Area