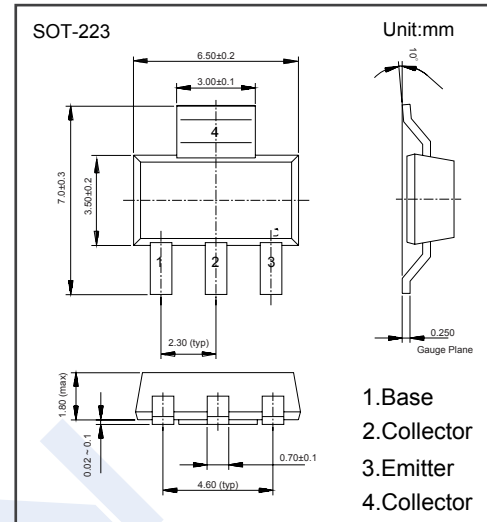


NPN Transistors

FZT849 (KZT849)

■ Features

- Collector Current Capability $I_c=7A$
- Collector Emitter Voltage $V_{CE0}=30V$
- Very low saturation voltages
- Complementary to FZT949

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	80	V
Collector - Emitter Voltage	V_{CEO}	30	
Emitter - Base Voltage	V_{EBO}	6	
Collector Current - Continuous	I_c	7	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

FZT849 (KZT849)

■ Electrical Characteristics Ta = 25°C

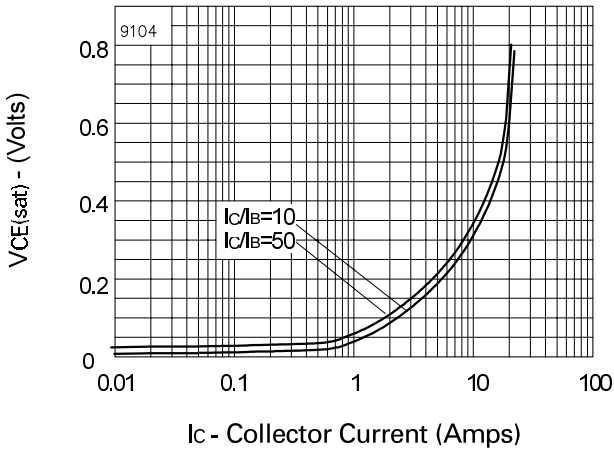
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _c = 100 μA, I _E = 0	80			V
Collector- emitter breakdown voltage	V _{CER}	I _c = 1 μA, R _B ≤ 1KΩ	80			
Collector- emitter breakdown voltage	V _{CEO}	I _c = 10 mA, I _B = 0	30			
Emitter - base breakdown voltage	V _{EBO}	I _E = 100 μA, I _c = 0	6			
Collector-base cut-off current	I _{CB0}	V _{CB} = 70 V, I _E = 0			0.05	nA
		V _{CB} = 70 V, I _E = 0, Ta = 100°C			1	μA
Collector-emitter cut-off current (R ≤ 1KΩ)	I _{CER}	V _{CB} = 70 V, I _E = 0			50	nA
		V _{CB} = 70 V, I _E = 0, Ta = 100°C			1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 6V, I _c =0			10	nA
Collector-emitter saturation voltage	V _{CE(sat)}	I _c =500mA, I _B =20mA (Note.1)			50	mV
		I _c =1 A, I _B =20mA (Note.1)			110	
		I _c =2 A, I _B =20mA (Note.1)			214	
		I _c =6.5 A, I _B =300mA (Note.1)			350	
Base - emitter saturation voltage	V _{BE(sat)}	I _c =6.5 A, I _B =300mA (Note.1)			1.2	V
Base - emitter turn-on voltage	V _{BE(on)}	V _{CE} = 1V, I _c = 6.5A (Note.1)			1.13	
DC current gain (Note.1)	h _{FE(1)}	V _{CE} = 1V, I _c = 10mA	100			
	h _{FE(2)}	V _{CE} = 1V, I _c = 1 A	100		300	
	h _{FE(3)}	V _{CE} = 1V, I _c = 7 A	100			
	h _{FE(4)}	V _{CE} = 2V, I _c = 20 A	30			
Switching Times	t _{on}	I _c =1 A, V _{CC} =10V		45		ns
	t _{off}	I _{B1} =100mA, I _{B2} =100mA		630		
Collector output capacitance	C _{ob}	V _{CB} = 10V, f=1MHz (Note.1)		75		pF
Transition frequency	f _T	V _{CE} = 10V, I _c = 100mA, f=50MHz		100		MHz

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

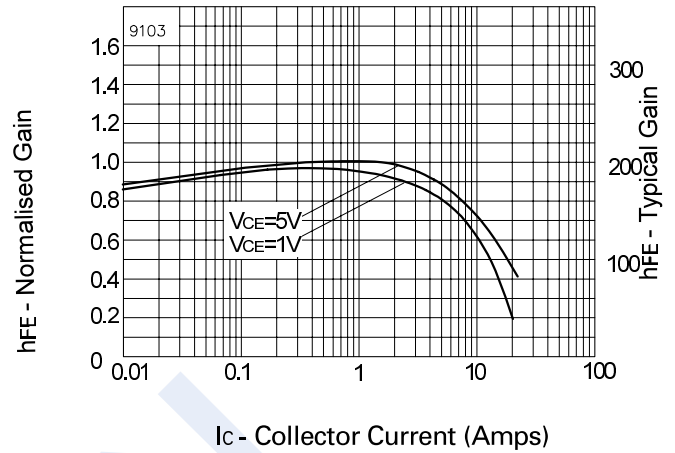
NPN Transistors

FZT849 (KZT849)

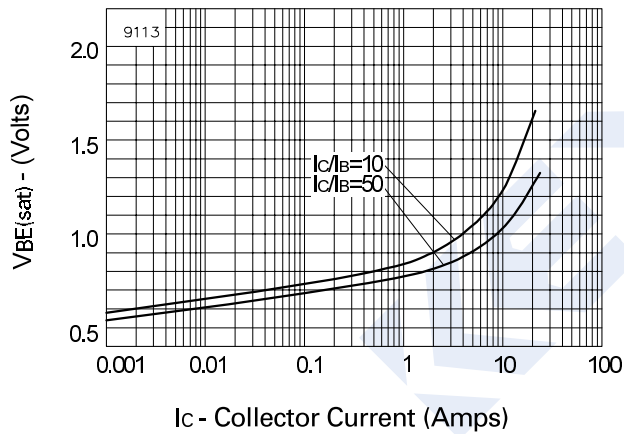
■ Typical Characteristics



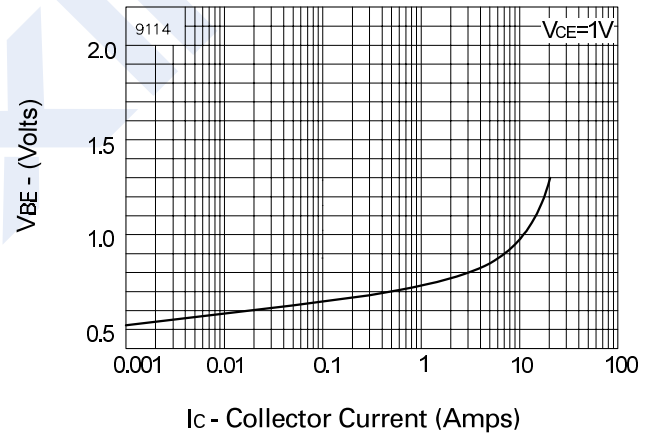
$V_{CE(sat)}$ v I_C



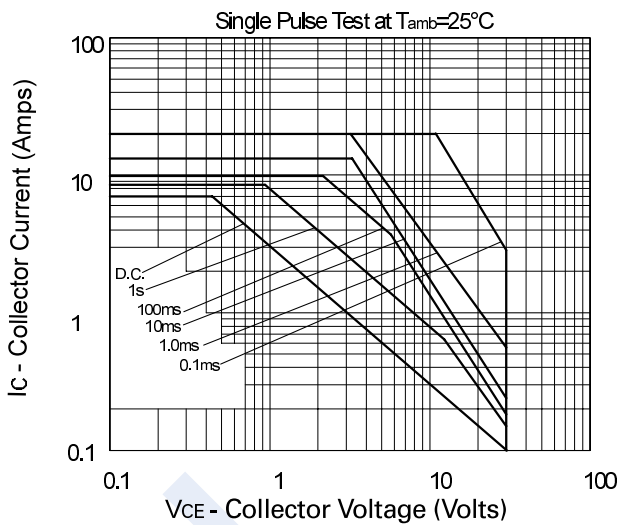
hFE v I_C



$V_{BE(sat)}$ v I_C



$V_{BE(on)}$ v I_C



Safe Operating Area