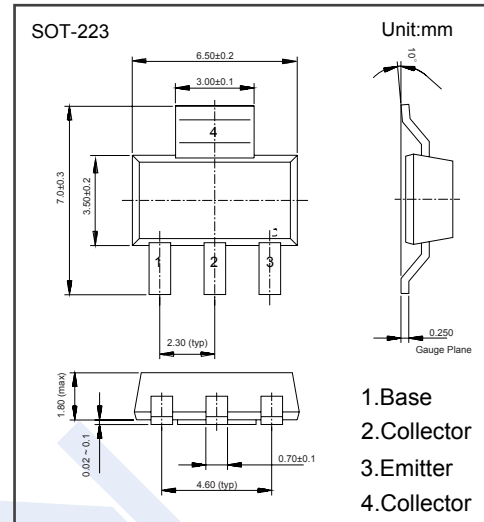


NPN Transistors

FZT1053A (KZT1053A)

■ Features

- Collector Current Capability $I_C=4.5A$
- Collector Emitter Voltage $V_{CE0}=75V$
- Low Saturation Voltage



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	150	V
Collector - Emitter Voltage	V_{CEO}	75	
Emitter - Base Voltage	V_{EBO}	7.5	
Collector Current - Continuous	I_C	4.5	A
Collector Current - Pulse	I_{CP}	10	
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

FZT1053A (KZT1053A)

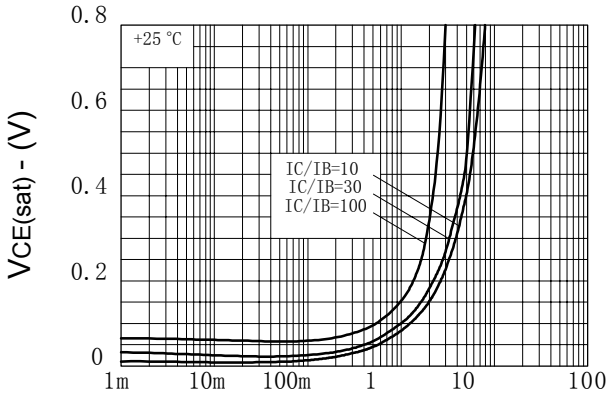
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CBO}	I _C = 100 μA, I _E = 0	150			V
Collector- emitter breakdown voltage	V _{CES}	I _C = 100 μA, I _B = 0	150			
Collector- emitter breakdown voltage	V _{CEO}	I _C = 10 mA, I _B = 0	75			
Collector- emitter breakdown voltage	V _{CEV}	I _C = 100 μA, V _{EB} = 1V	150			
Emitter - base breakdown voltage	V _{EBO}	I _E = 100 μA, I _C = 0	7.5			
Collector-base cut-off current	I _{CBO}	V _{CB} = 150 V, I _E = 0			100	nA
Collector-emitter cut-off current	I _{CES}	V _{CE} = 120 V, I _B = 0			100	
Emitter cut-off current	I _{EBO}	V _{EB} = 5V, I _C =0			100	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =200mA, I _B =20mA			30	mV
		I _C =500mA, I _B =20mA			75	
		I _C =1 A, I _B =10mA			200	
		I _C =2 A, I _B =100mA			210	
		I _C =4.5 A, I _B =200mA			440	
Base - emitter saturation voltage	V _{BE(sat)}	I _C =3 A, I _B =100mA			1	V
Base - emitter turn-on voltage	V _{BE(on)}	V _{CE} = 2V, I _C = 3A			0.95	
DC current gain	h _{FE(1)}	V _{CE} = 2V, I _C = 10mA	270			
	h _{FE(2)}	V _{CE} = 2V, I _C = 500mA	300		1200	
	h _{FE(3)}	V _{CE} = 2V, I _C = 1 A	300			
	h _{FE(4)}	V _{CE} = 2V, I _C = 4.5 A	40			
	h _{FE(5)}	V _{CE} = 2V, I _C = 10 A		20		
Switching Times	t _{on}	I _C =2 A, V _{CC} =50V, I _{B1} =I _{B2} =±20mA		162		ns
	t _{off}			900		
Collector output capacitance	C _{ob}	V _{CB} = 10V, f=1MHz			30	pF
Transition frequency	f _T	V _{CE} = 10V, I _C = 50mA, f=100MHz		140		MHz

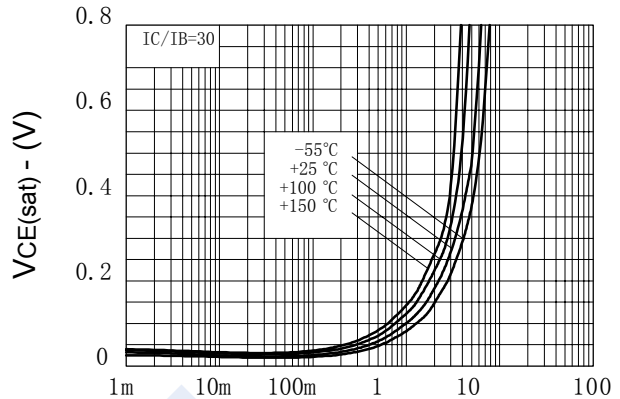
NPN Transistors

FZT1053A (KZT1053A)

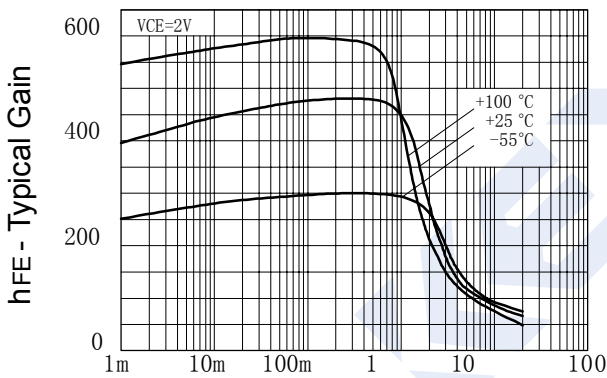
■ Typical Characteristics



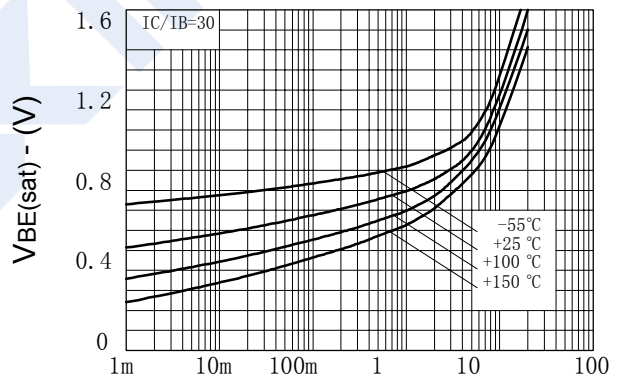
I_C - Collector Current (A)
 $V_{CE(sat)}$ v I_C



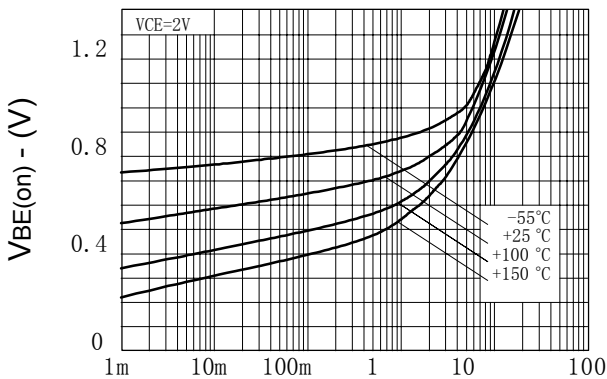
I_C - Collector Current (A)
 $V_{CE(sat)}$ v I_C



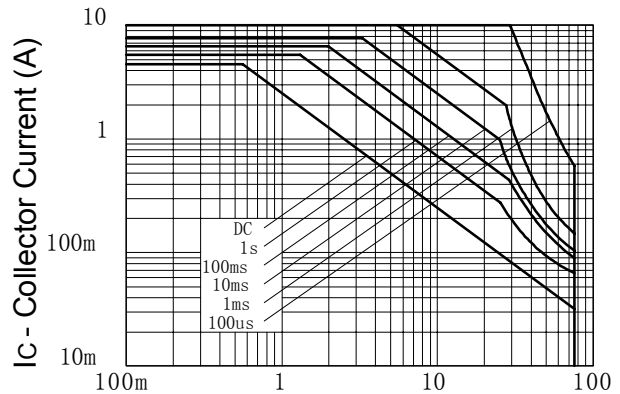
I_C - Collector Current (A)
 h_{FE} v I_C



I_C - Collector Current (A)
 $V_{BE(sat)}$ v I_C



I_C - Collector Current (A)
 $V_{BE(on)}$ v I_C



V_{CE} - Collector Emitter Voltage (V)
Safe Operating Area