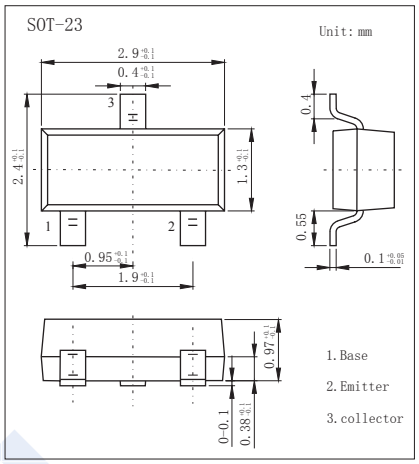
NPN Transistors

KTC3551T



■ Features

- Adoption of MBIT Processes.
- Large Current Capacitance.
- Low Collector-to-Emitter Saturation Voltage.
- High-Speed Switching.
- High Allowable Power Dis sipation.
- Complementary to KTA1551T.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	80	V
Collector - Emitter Voltage	V_{CES}	80	
	V_{CEO}	50	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	1	A
Collector Current - Pulse	I_{CP}	3	
Collector Power Dissipation	P_C	0.9	W
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

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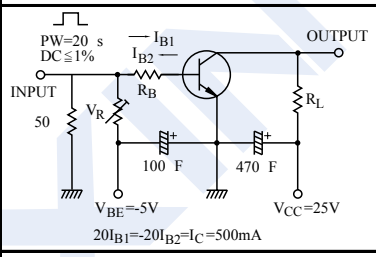
■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= 100 μA， I_E= 0	80			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 1 mA， I_B= 0	50			V
	V_{CES}	I_C= 100uA, V_{BE}= 0	80			V
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μ A， I_C= 0	5			V
Collector-base cut-off current	I_{CBO}	V_{CB}= 80 V , I_E= 0			100	nA
Emitter cut-off current	I_{EBO}	V_{EB}= 5V , I_C=0			100	nA
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500 mA, I_B=10mA			190	mV
		I_C=300 mA, I_B=6mA			135	mV
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C= 500 mA, I_B= 10mA			1.2	V
DC current gain	h_{FE}	V_{CE}= 2V, I_C= 100mA	200		560	
Turn-On Time	t_{on}			35		ns
Storage Time	t_{stg}			330		ns
Fall Time	t_f			40		ns
Collector output capacitance	C_{ob}	V_{CB}= 10V, I_E=0,f=1MHz		6		pF
Transition frequency	f_T	V_{CE}= 10V, I_C= 300mA		420		MHz

■ Marking

Marking	HK

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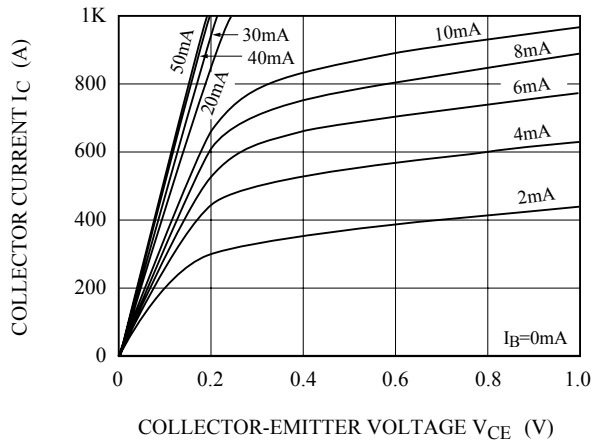
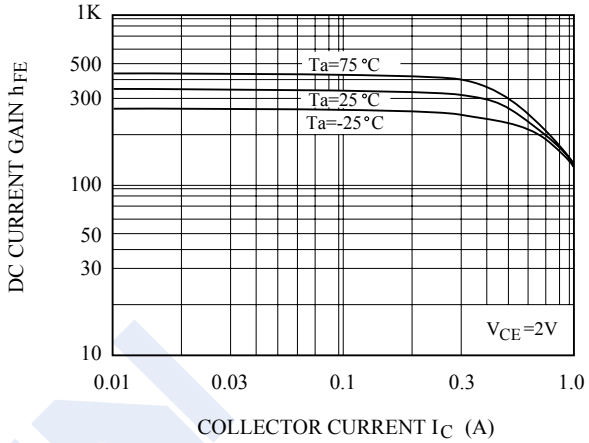
■ Typical Characterisitics

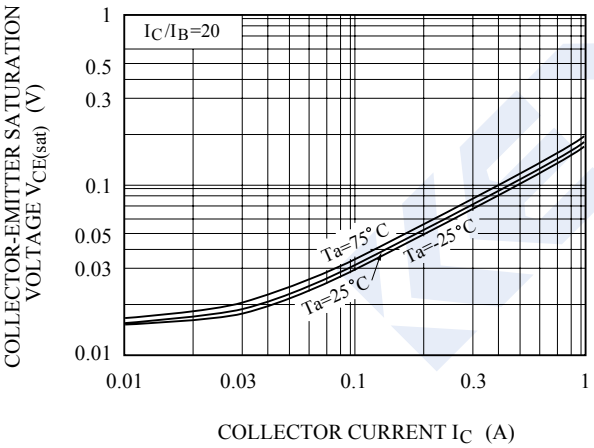
I_C - V_{CE}



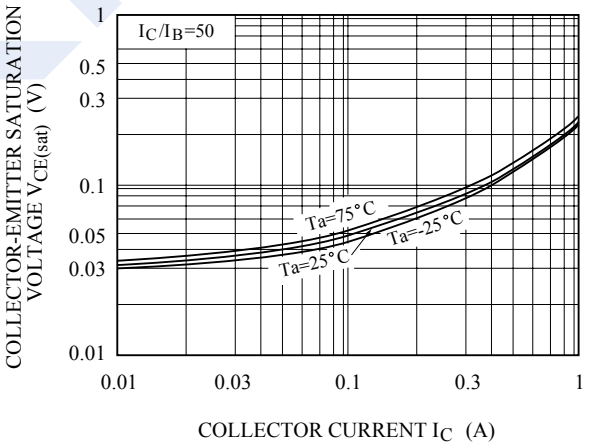
h_{FE} - I_C



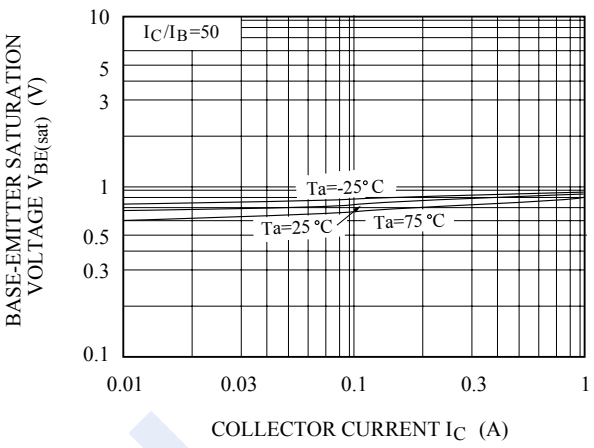
$V_{CE(sat)}$ - I_C



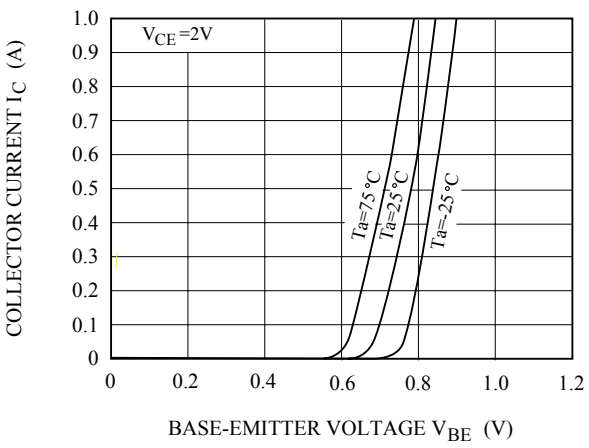
$V_{CE(sat)}$ - I_C



$V_{BE(sat)}$ - I_C



I_C - V_{BE}



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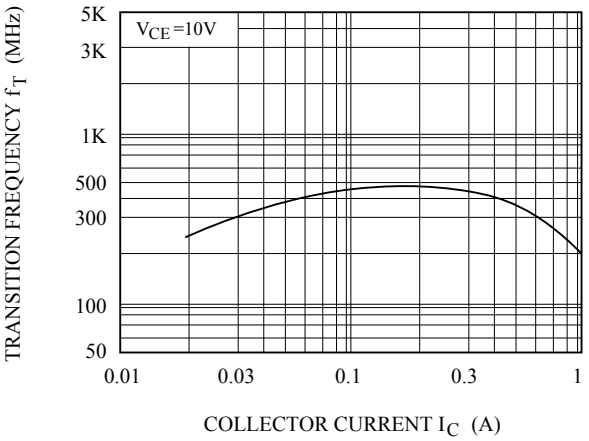
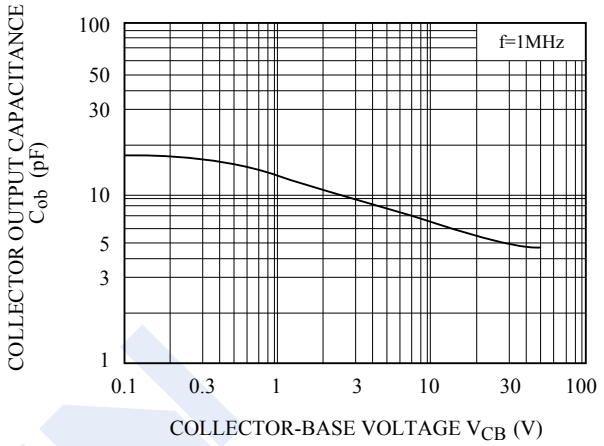
■ Typical Characterisitics

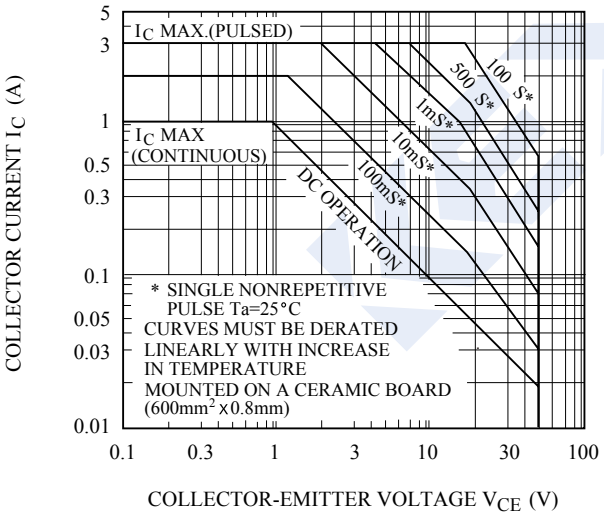
f_T - I_C



C_{ob} - V_{CB}



SAFE OPERATING AREA



Pc - Ta