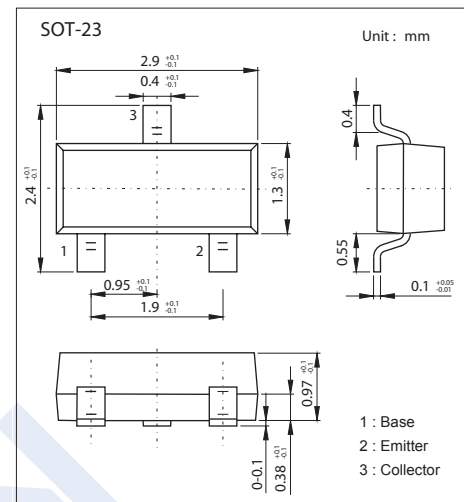
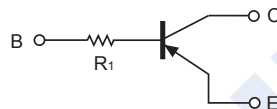


Digital Transistors

KTA200

■ Features

- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors (see equivalent circuit).
- The bias resistors consist of thin-film resistors with complete isolation to allow positive biasing of the input. They also have the advantage of almost completely eliminating parasitic effects.
- Only the on/off conditions need to be set for operation, for operation, making the circuit design easy.
- Marking:93

■ Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-50	V
Collector-emitter voltage	V_{CEO}	-50	
Emitter-base voltage	V_{EBO}	-5	
Collector current	I_C	-100	mA
Collector power dissipation	P_C	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = -50 \mu\text{A}$, $I_E = 0$	-50			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = -1 \text{ mA}$, $I_B = 0$	-50			
Emitter - base breakdown voltage	V_{EBO}	$I_E = -50 \mu\text{A}$, $I_C = 0$	-5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = -50 \text{ V}$, $I_E = 0$			-0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -4 \text{ V}$, $I_C = 0$			-0.5	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -5 \text{ mA}$, $I_B = -0.25 \text{ mA}$			-0.3	V
DC current gain	h_{FE}	$V_{CE} = -5 \text{ V}$, $I_C = -1 \text{ mA}$	100	250	600	
Input resistance	R_1	-	3.29	4.7	6.11	$\text{k}\Omega$
Transition frequency	f_r	$V_{CE} = -10 \text{ V}$, $I_C = -5 \text{ mA}$, $f = 100 \text{ MHz}$		250		MHz

Digital Transistors

KTA200

■ Typical Characteristics

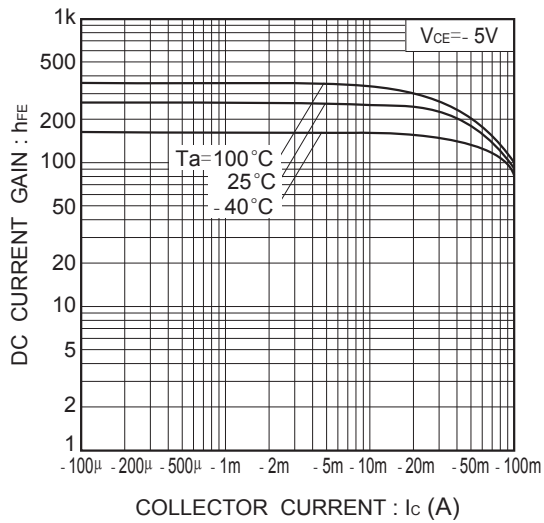


Fig.1 DC current gain vs. collector current

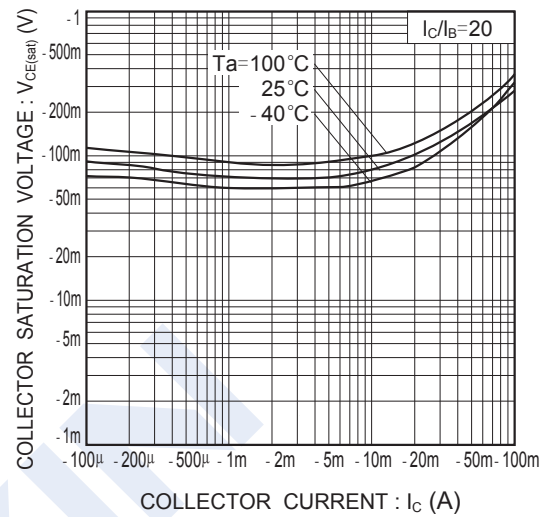


Fig.2 Collector-emitter saturation voltage vs. collector current