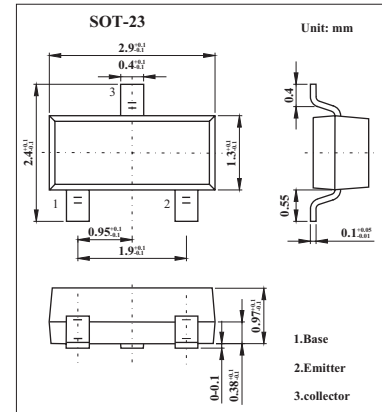


NPN Transistors

KST8050

■ Features

- Collector Current: $I_c=1.5A$



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

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current -Continuous	I_c	1.5	A
Collector Dissipation	P_c	0.3	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to 150	$^\circ C$

■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	$I_c = 100 \mu A, I_E = 0$	40			V
Collector-emitter breakdown voltage	V_{CEO}	$I_c = 1mA, I_B = 0$	25			V
Emitter-base Breakdown voltage	V_{EBO}	$I_E = 100 \mu A, I_c = 0$	5			V
Collector-base cut-off current	I_{CBO}	$V_{CB} = 40 V, I_E = 0$			0.1	μA
Collector-emitter cut-off current	I_{CEO}	$V_{CE} = 20 V, I_B = 0$			0.1	μA
Emitter-base cut-off current	I_{EBO}	$V_{EB} = 5 V, I_c = 0$			0.1	μA
DC current gain	h_{FE}	$V_{CE} = 1 V, I_c = 100 mA$	120		400	
		$V_{CE} = 1 V, I_c = 800 mA$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 800 mA, I_B = 80 mA$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_c = 800 mA, I_B = 80 mA$			1.2	V
Transition frequency	f_T	$V_{CE} = 10 V, I_c = 50 mA, f = 30 MHz$	100			MHz

■ h_{FE} Classification

Marking	Y1		
Rank	L	H	J
h_{FE}	120~200	200~350	300~400

KST8050

■ Typical Characteristics

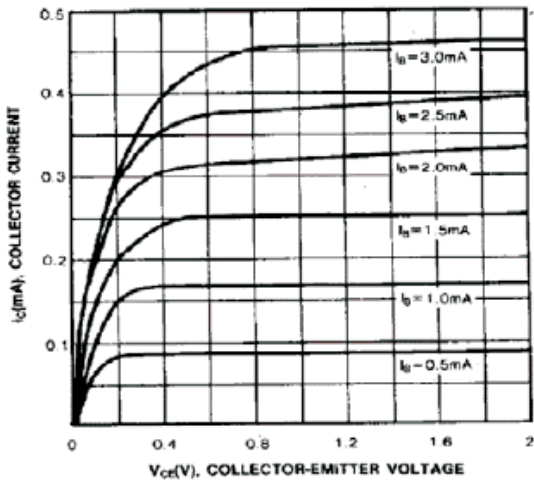


Fig.1 Static Characteristic

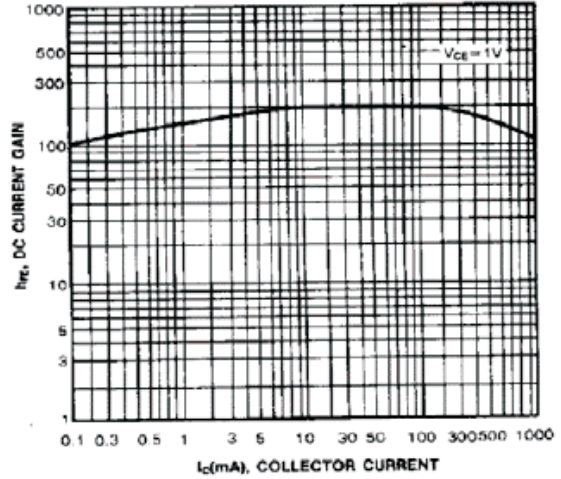


Fig.2 DC Current Gain

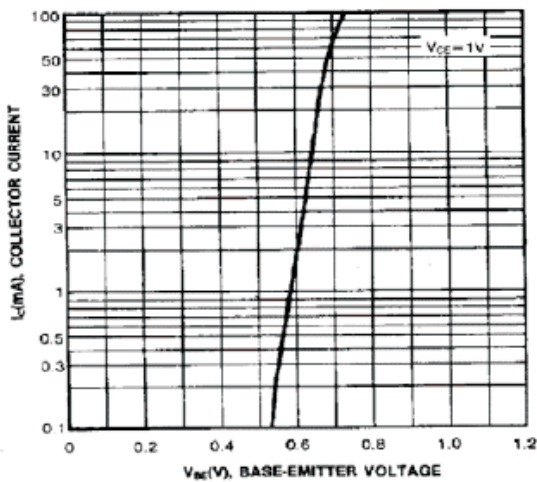


Fig.3 Base Emitter ON Voltage

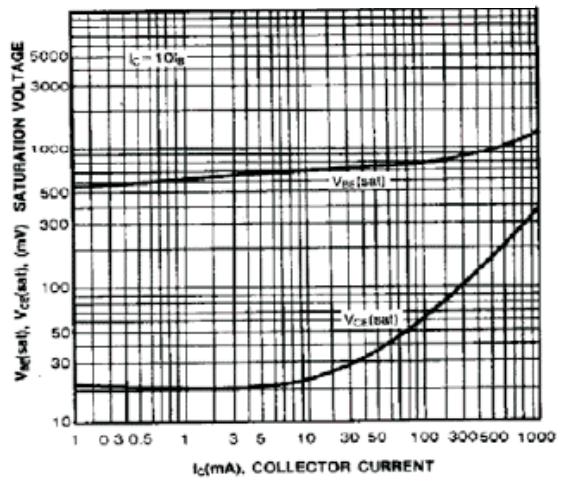


Fig.4 Base Emitter Saturation Voltage
Collector Emitter Saturation Voltage

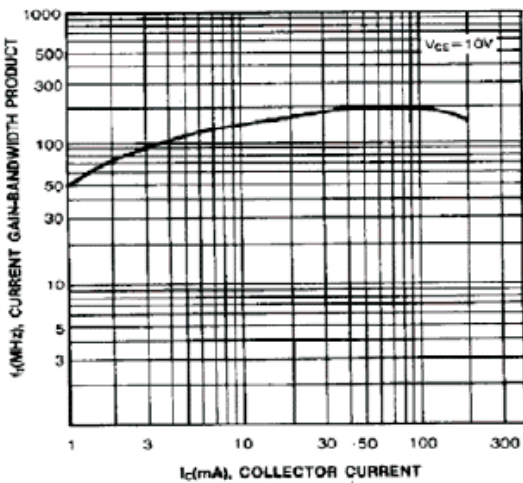


Fig.5 Current Gain Bandwidth Product

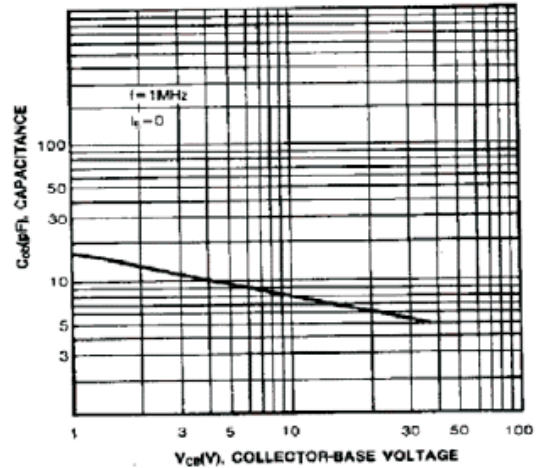


Fig.6 Collector Output Capacitance