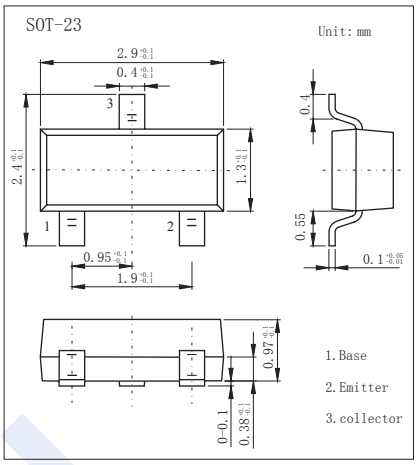
NPN Transistors

KST8050M



■ Features

● Collector Current: I_C=0.8A

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current -Continuous	I_C	0.8	A
Collector Dissipation	P_C	0.3	W
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	-55 to 150	℃

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	I_C = 100 uA , I_E = 0	40			V
Collector-emitter breakdown voltage *	V_{CEO}	I_C = 1 mA , I_B = 0	25			V
Emitter-base Breakdown voltage	V_{EBO}	I_E = 100 uA , I_C = 0	6			V
Collector-base cut-off current	I_{CBO}	V_{CB} = 35V , I_E = 0			0.1	uA
Collector-emitter cut-off current	I_{CEO}	V_{CE} = 20 V , I_B = 0			0.1	uA
DC current gain	h_{FE}	V_{CE} = 1 V , I_C = 1 mA	45			
		V_{CE} = 1 V , I_C = 100 mA	100		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} = 6 V , I_C = 20 mA , f = 30 MHz	150			MHz

* Pulse Test : pulse width ≤ 300 u s , duty cycle ≤ 2%.

■ Classification of $h_{fe(2)}$

Marking	Y11		
Rank	L		J
Range	100-200	200-350	300-400

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■ Typical Characterisitics

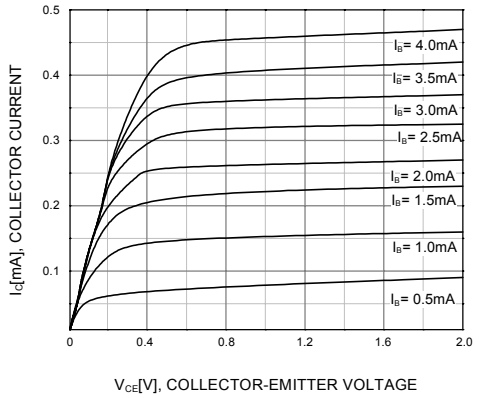

Figure 1. Static Characteristic

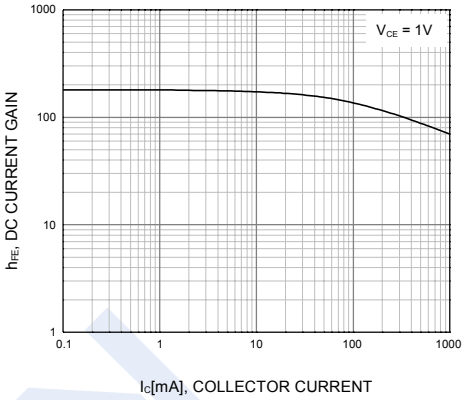

Figure 2. DC current Gain

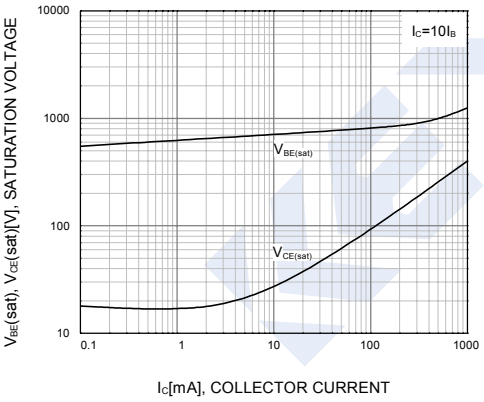

Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

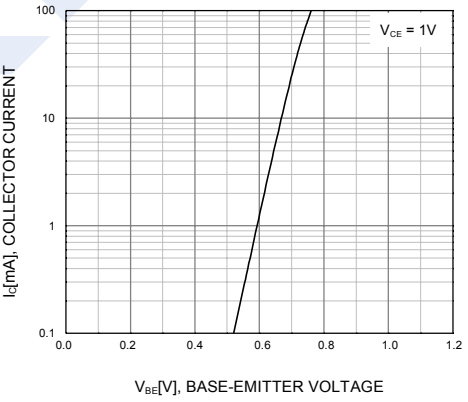

Figure 4. Base-Emitter On Voltage

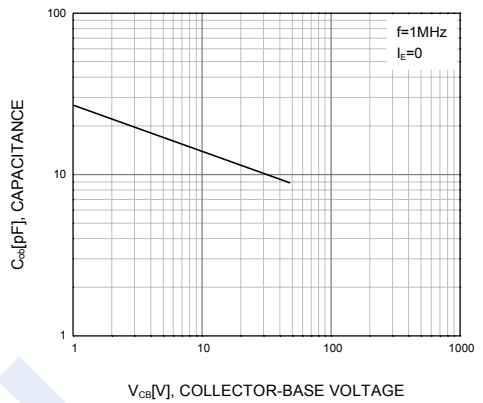

Figure 5. Collector Output Capacitance

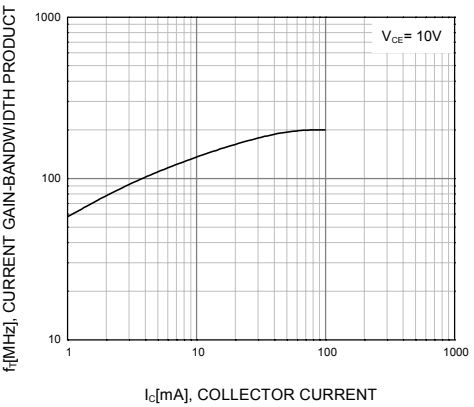

Figure 6. Current Gain Bandwidth Product