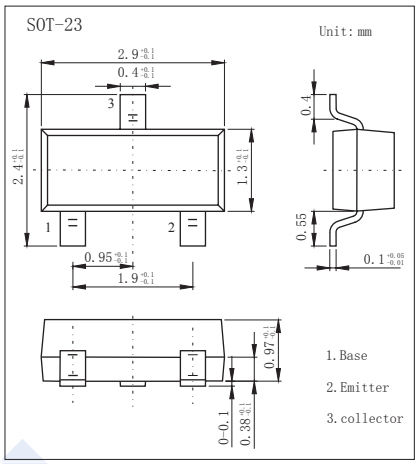
NPN Transistors

KST8050D-50



■ Features

- Collector Current Capability I_C=1.2A
- Collector Emitter Voltage V_{CEO}=50V

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current -Continuous	I_C	1.2	A
Collector Dissipation	P_C	250	mW
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	-55 to 150	℃

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	I_C = 100 uA, I_E = 0	50			V
Collector-emitter breakdown voltage	V_{CEO}	I_C = 1mA , I_B = 0	50			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} = 50 V , I_E = 0			0.1	μA
Collector-emitter cut-off current	I_{CEO}	V_{CE} = 40 V , I_B = 0			1	μA
Emitter-base cut-off current	I_{EBO}	V_{EB} = 6 V , I_C = 0			0.1	μA
DC current gain	h_{FE}	V_{CE} = 1 V , I_C = 100 mA	100		320	
		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

■ Classification of $h_{fe(1)}$

Range	100-200	160-320
Marking	Y1C	Y1D

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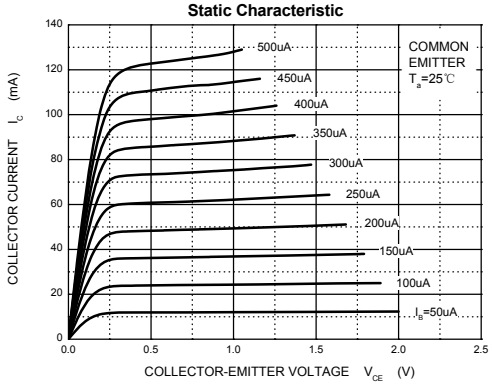
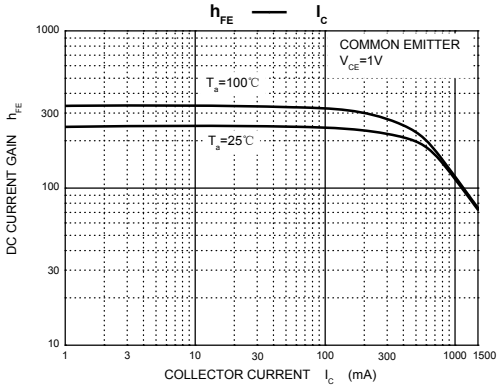
■ Typical Characteristics

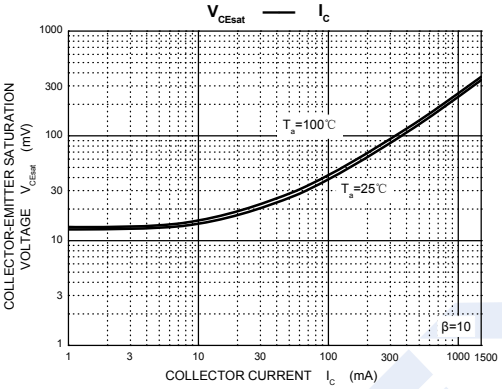
Static Characteristic



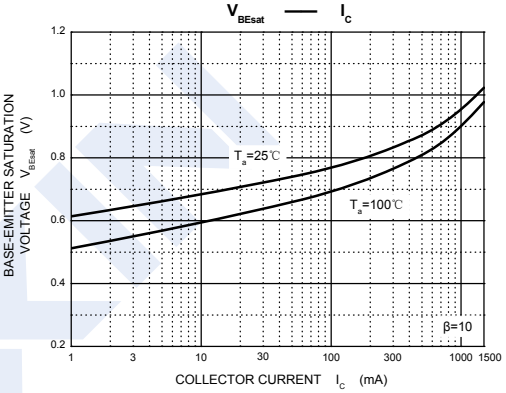
h_{FE} — I_C



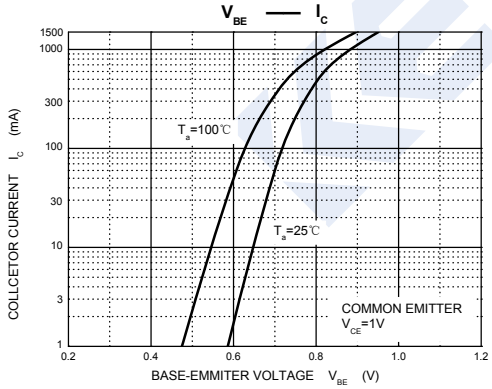
V_{CEsat} — I_C



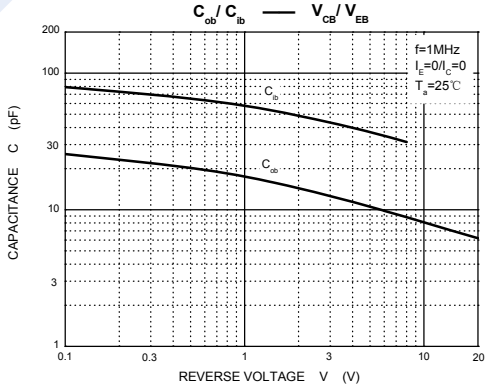
V_{BEsat} — I_C



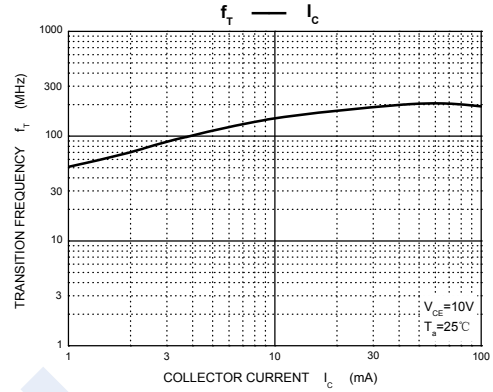
V_{BE} — I_C



C_{ob} / C_{ib} — V_{CB} / V_{EB}



f_T — I_C



P_C — T_a