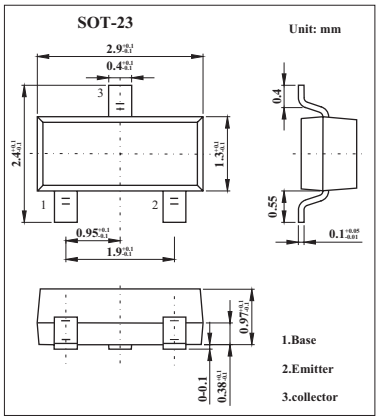
NPN Transistors

S8050



■ Features

- Collector Current: I_C=0.5A

■ 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}	5	V
Collector Current -Continuous	I_C	0.5	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	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	I_C = 100 μA , 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 μA , I_C = 0	5			V
Collector-base cut-off current	I_{CBO}	V_{CB} = 40 V , I_E = 0			0.1	μ A
Collector-emitter cut-off current	I_{CEO}	V_{CE} = 20 V , I_B = 0			0.1	μ A
Emitter-base cut-off current	I_{EBO}	V_{EB} = 5 V , I_C = 0			0.1	μ A
DC current gain	h_{FE}	V_{CE} = 1 V , I_C = 50 mA	120		350	
		V_{CE} = 1 V , I_C = 500 mA	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 500 mA , I_B = 50 mA			0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 500 mA , I_B = 50 mA			1.2	V
Transition frequency	f_T	V_{CE} = 6 V , I_C = 20 mA , f = 30 MHz	150			MHz

■ h_{FE} Classification

Marking	J3Y	
Rank	L	H
hFE	120～200	200～350

ZXV

S8050

■ Typical Characteristics

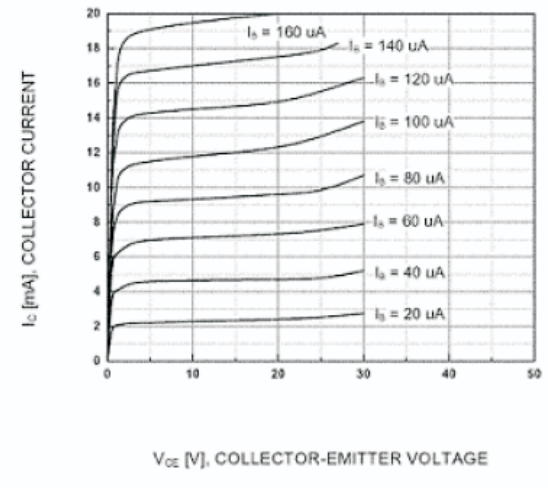


Fig.1 Static Characteristic

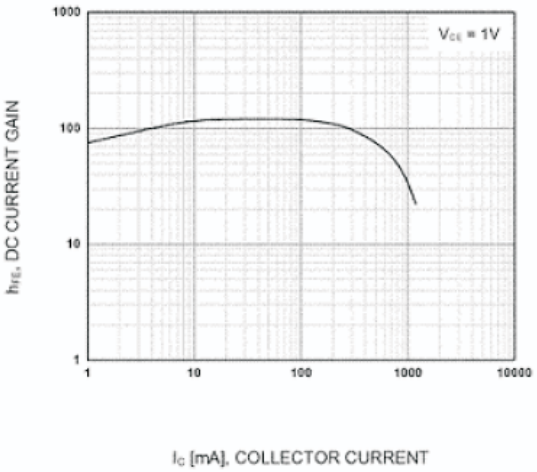


Fig.2 DC Current Gain

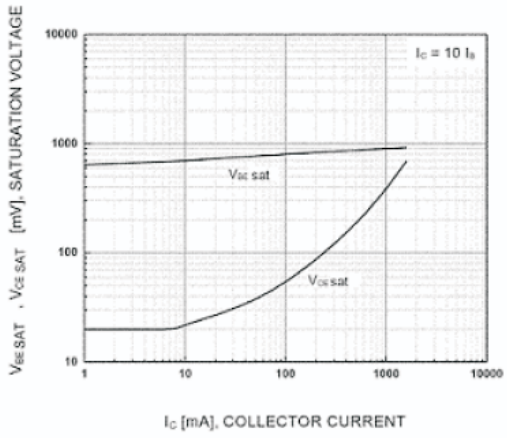


Fig.3 Base-Emitter Saturation Voltage
Callector-Emitter Saturation Voltage

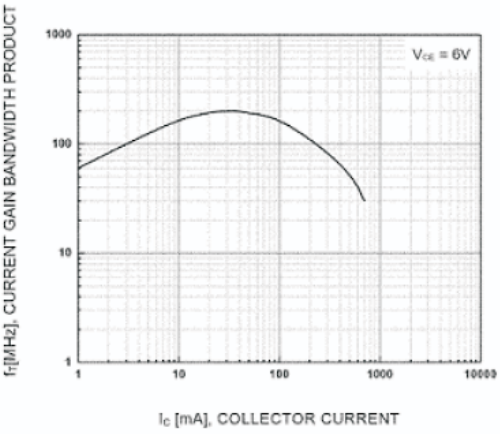


Fig.4 Current Gain Bandwidth Product