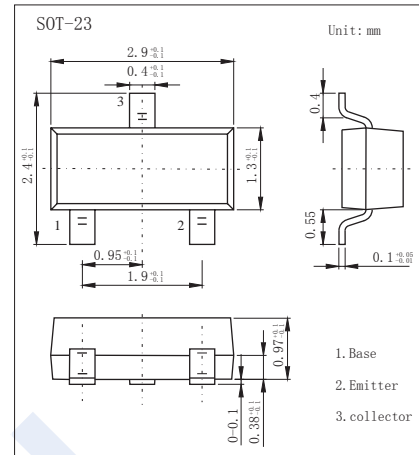


NPN Transistors

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■ Features

- Collector Current: $I_c=0.8A$

■ 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}	6	V
Collector Current -Continuous	I_c	0.8	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	Test conditions	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}	$I_c = 1 mA, I_B = 0$	25			V
Emitter-base Breakdown voltage	V_{EBO}	$I_E = 100 \mu A, I_c = 0$	6			V
Collector-base cut-off current	I_{CBO}	$V_{CB} = 35V, I_E = 0$			0.1	μA
Collector-emitter cut-off current	I_{CEO}	$V_{CE} = 20 V, I_B = 0$			0.1	μA
DC current gain	hFE	$V_{CE} = 1 V, I_c = 1 mA$	45			
		$V_{CE} = 1 V, I_c = 100 mA$	200		350	
		$V_{CE} = 1 V, I_c = 800 mA$	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 $\leq 300 \mu s$, duty cycle $\leq 2\%$.

■ Marking

Marking	1B
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NPN Transistors

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■ Typical Characteristics

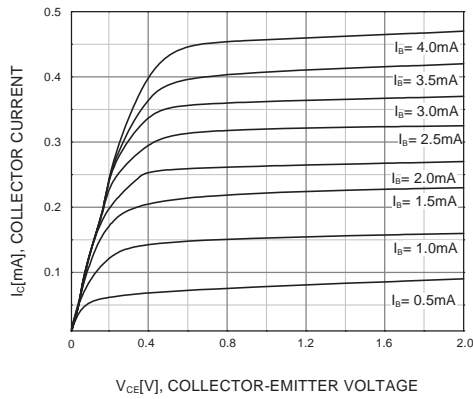


Figure 1. Static Characteristic

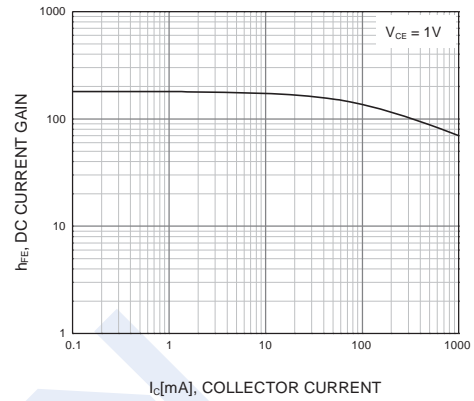


Figure 2. DC current Gain

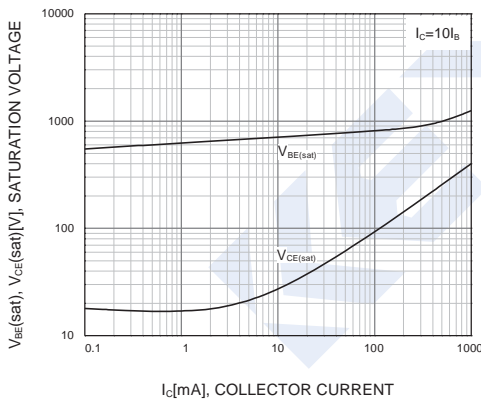


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

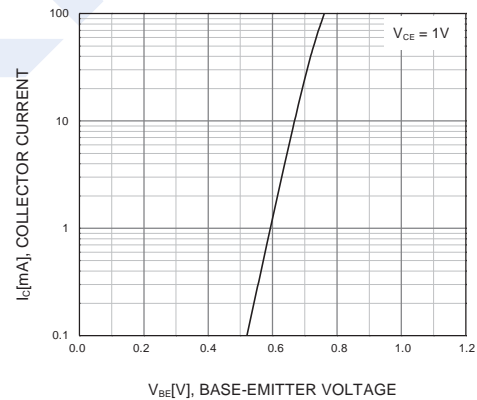


Figure 4. Base-Emitter On Voltage

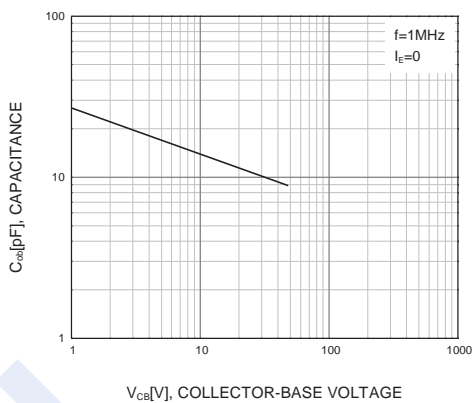


Figure 5. Collector Output Capacitance

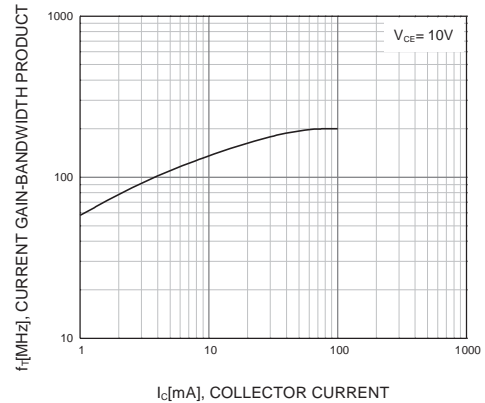


Figure 6. Current Gain Bandwidth Product