

2SC5121

Silicon NPN triple diffusion planar type

For general amplification

■ Features

- High collector-base voltage (Emitter open) V_{CBO}
- High collector-emitter voltage (Base open) V_{CEO}
- Small collector output capacitance (Common base, input open circuited) C_{ob}
- TO-126B package which requires no insulation plate for installation to the heat sink

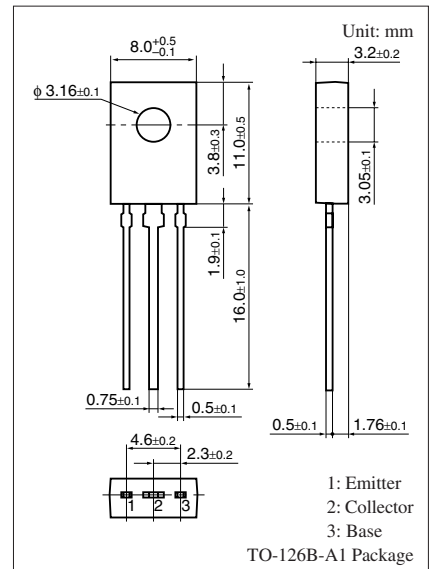
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

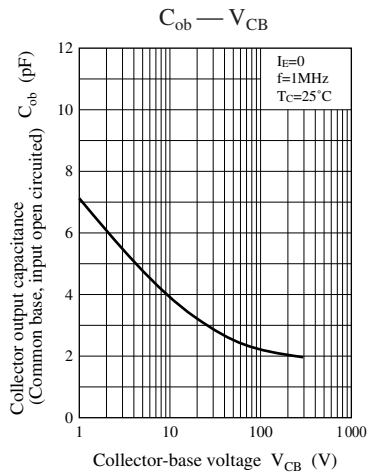
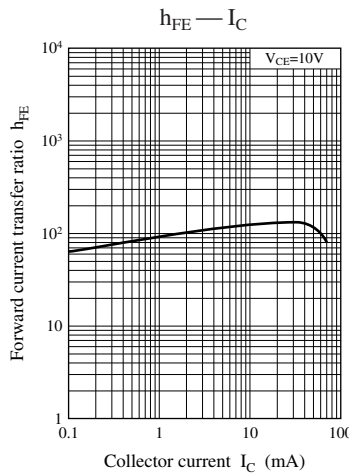
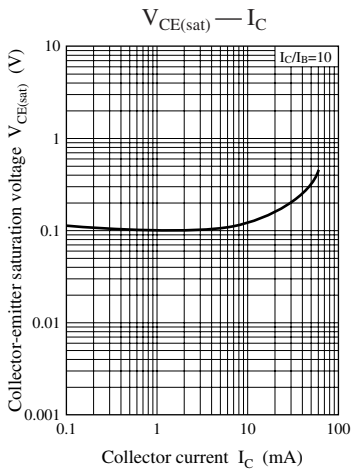
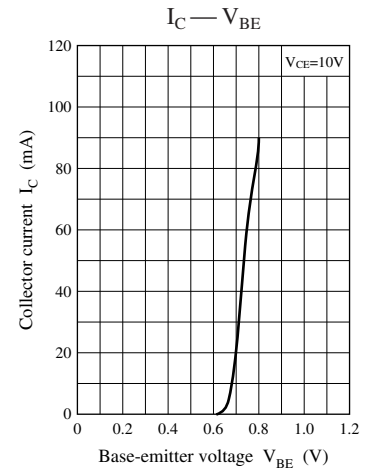
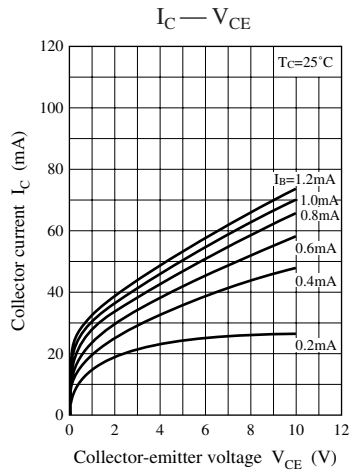
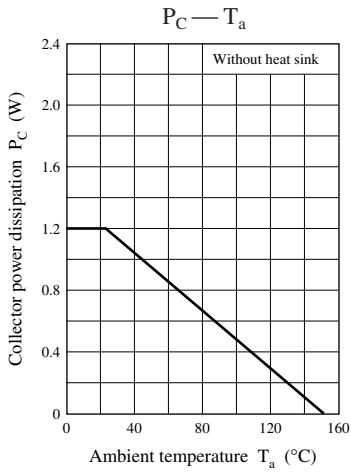
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	400	V
Collector-emitter voltage (Base open)	V_{CEO}	400	V
Emitter-base voltage (Collector open)	V_{EBO}	7	V
Collector current	I_C	70	mA
Peak collector current	I_{CP}	100	mA
Collector power dissipation	P_C	1.2	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 100 \mu\text{A}$, $I_B = 0$	400			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 1 \mu\text{A}$, $I_C = 0$	7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 300 \text{ V}$, $I_E = 0$			10	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = 380 \text{ V}$, $I_B = 0$, $T_a = 80^\circ\text{C}$			10	μA
Forward current transfer ratio *	h_{FE}	$V_{CE} = 10 \text{ V}$, $I_C = 5 \text{ mA}$	30		100	—
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 50 \text{ mA}$, $I_B = 5 \text{ mA}$			1.2	V
Transition frequency	f_T	$V_{CB} = 10 \text{ V}$, $I_E = -10 \text{ mA}$, $f = 200 \text{ MHz}$	50	80		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = 10 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$		4	8	pF

Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.





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