

2SC5121

Silicon NPN triple diffusion planar type

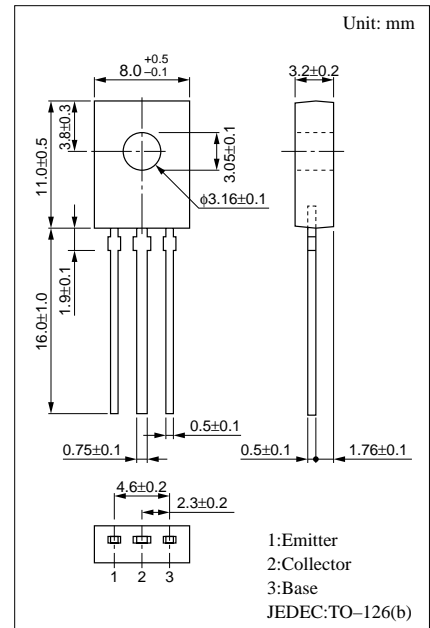
For general amplification

■ Features

- High collector to base voltage V_{CBO}
- High collector to emitter V_{CEO}
- Small collector output capacitance C_{ob}
- TO-126 package, which is fitted to a heat sink without any insulation parts

■ Absolute Maximum Ratings ($T_C=25^\circ\text{C}$)

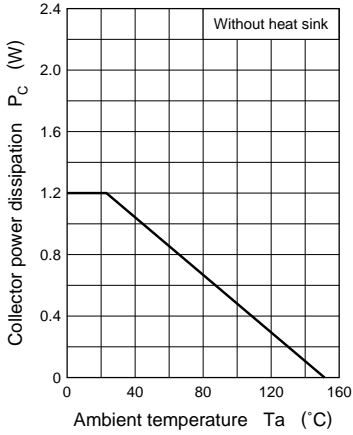
Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	400	V
Collector to emitter voltage	V_{CEO}	400	V
Emitter to base voltage	V_{EBO}	7	V
Peak collector current	I_{CP}	100	mA
Collector current	I_C	70	mA
Collector power dissipation	P_C	1.2	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage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



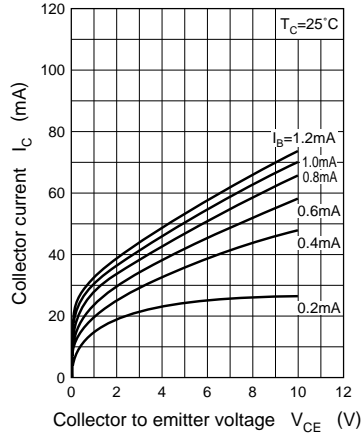
■ Electrical Characteristics ($T_C=25^\circ\text{C}$)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 300\text{V}, I_E = 0$			10	μA
	Hot I_{CEO}	$V_{CE} = 380\text{V}, I_B = 0, T_a = 80^\circ\text{C}$			10	μA
Collector to emitter voltage	V_{CEO}	$I_C = 100\mu\text{A}, I_B = 0$	400			V
Emitter to base voltage	V_{EBO}	$I_E = 1\mu\text{A}, I_C = 0$	7			V
Forward current transfer ratio	h_{FE}	$V_{CE} = 10\text{V}, I_C = 5\text{mA}$	30		150	
Collector to 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	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		4	8	pF

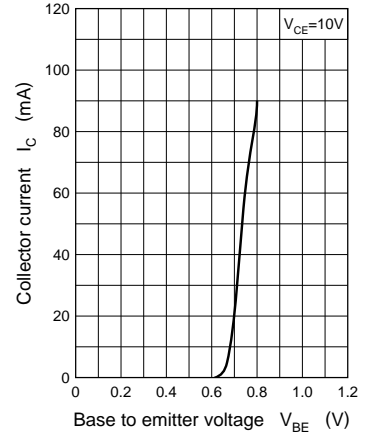
$P_C - T_a$



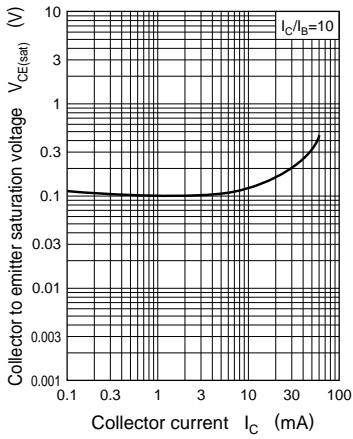
$I_C - V_{CE}$



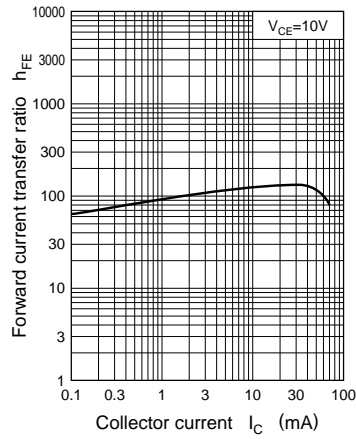
$I_C - V_{BE}$



$V_{CE(sat)} - I_C$



$h_{FE} - I_C$



$C_{ob} - V_{CB}$

