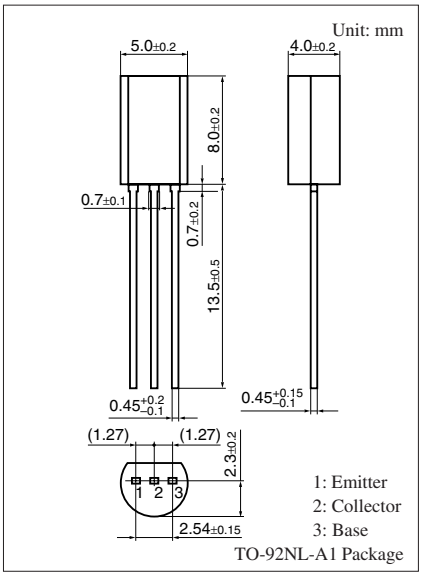
2SB1221

Silicon PNP epitaxial planar type

For general amplification



■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Allowing supply with the radial taping

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	−250	V
Collector-emitter voltage (Base open)	V_{CEO}	−200	V
Emitter-base voltage (Collector open)	V_{EBO}	−5	V
Collector current	I_C	−70	mA
Peak collector current	I_{CP}	−100	mA
Collector power dissipation	P_C	1	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

■ Electrical Characteristics $T_a = 25°C \pm 3°C$

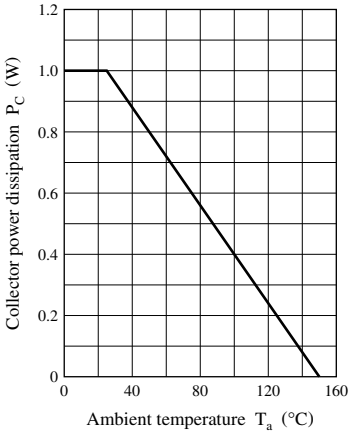
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -100$ μA, $I_B = 0$	−200			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = -1$ μA, $I_C = 0$	−5			V
Forward current transfer ratio *	h_{FE}	$V_{CE} = -10$ V, $I_C = -5$ mA	30		220	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -50$ mA, $I_B = -5$ mA			−1.5	V
Transition frequency	f_T	$V_{CB} = -10$ V, $I_E = 10$ mA, f = 200 MHz	50	80		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = -10$ V, $I_E = 0$, f = 1 MHz		5	10	pF

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

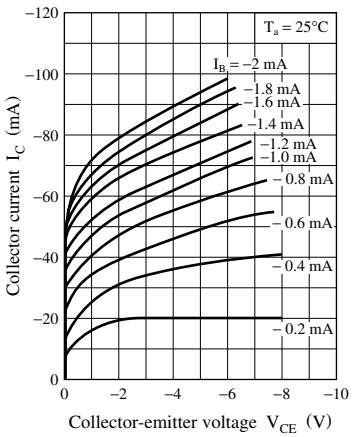
2. *: Rank classification

Rank	P	Q	R
h_{FE}	30 to 100	60 to 150	100 to 220

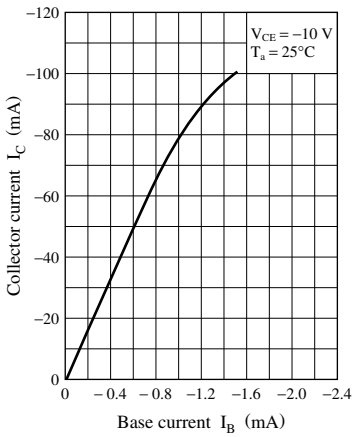
P_C — T_a



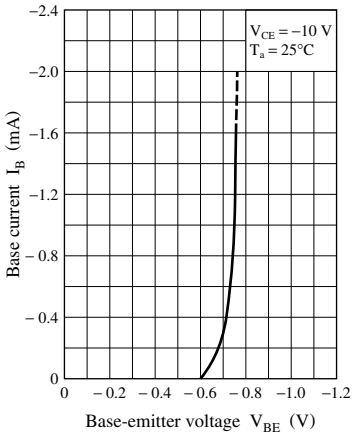
I_C — V_{CE}



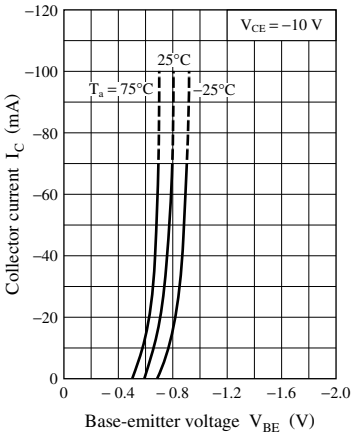
I_C — I_B



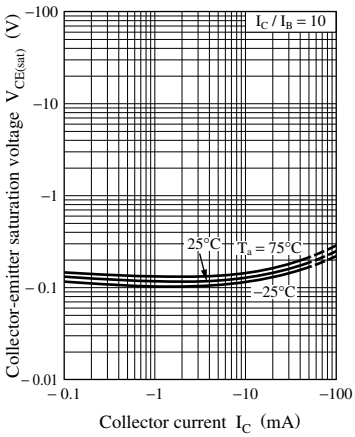
I_B — V_{BE}



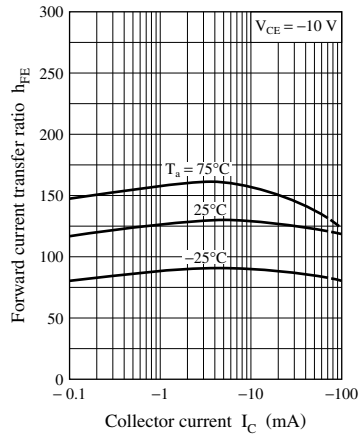
I_C — V_{BE}



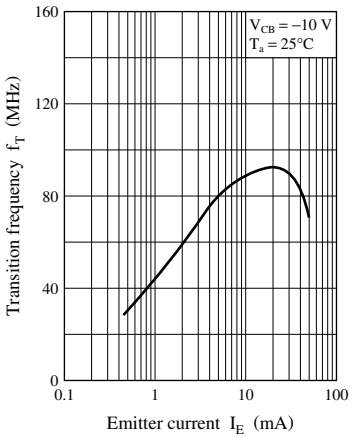
$V_{CE(sat)}$ — I_C



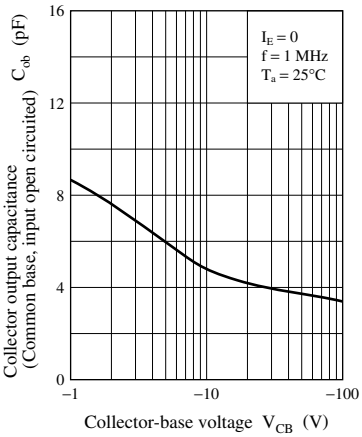
h_{FE} — I_C



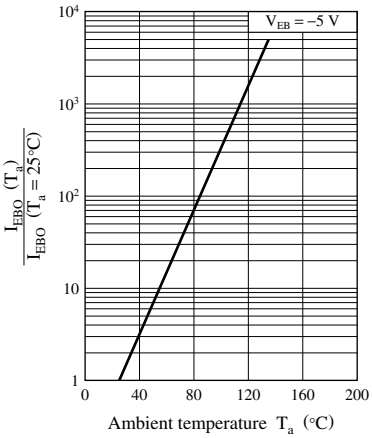
f_T — I_E



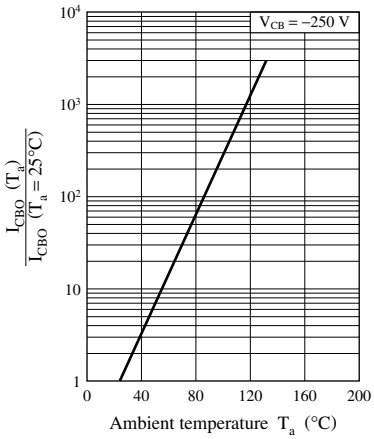
C_{ob} — V_{CB}



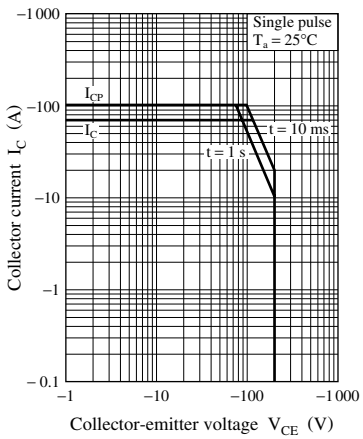
I_{EBO} — T_a



I_{CBO} — T_a



Safe operation area



This product complies with the RoHS Directive (EU 2002/95/EC).

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