

# 2SB1221

Silicon PNP epitaxial planer type

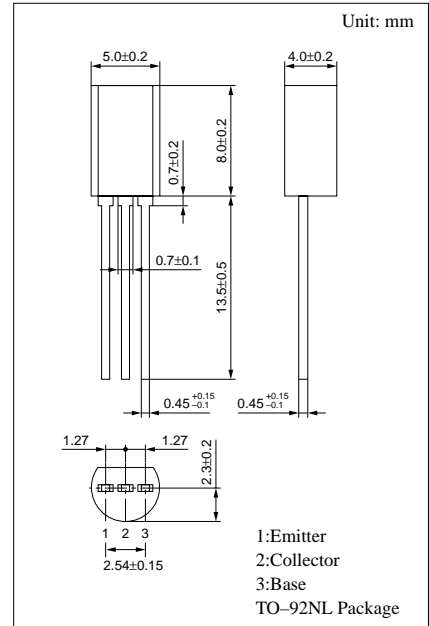
For general amplification  
Complementary to 2SC3941

**■ Features**

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

**■ Absolute Maximum Ratings (Ta=25°C)**

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



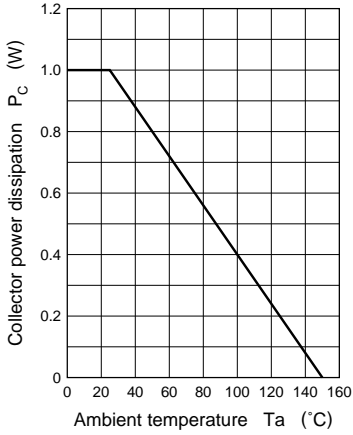
**■ Electrical Characteristics (Ta=25°C)**

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = -12V, I_E = 0$			-2	$\mu A$
Collector to emitter voltage	$V_{CEO}$	$I_C = -100\mu A, I_B = 0$	-200			V
Emitter to base voltage	$V_{EBO}$	$I_E = -1\mu A, I_C = 0$	-5			V
Forward current transfer ratio	$h_{FE}^*$	$V_{CE} = -10V, I_C = -5mA$	60		220	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -50mA, I_B = -5mA$			-1.5	V
Transition frequency	$f_T$	$V_{CB} = -10V, I_E = 10mA, f = 200MHz$	50	80		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$		5	10	pF

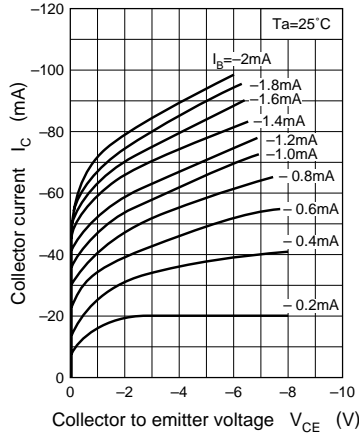
\* $h_{FE}$  Rank classification

Rank	Q	R
$h_{FE}$	60 ~ 150	100 ~ 220

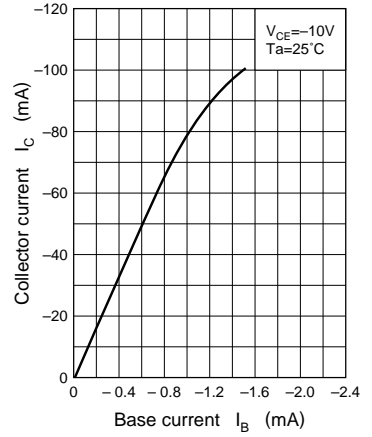
$P_C - T_a$



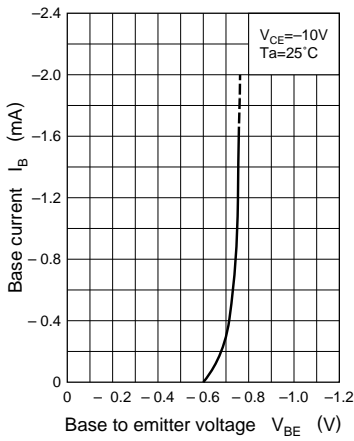
$I_C - V_{CE}$



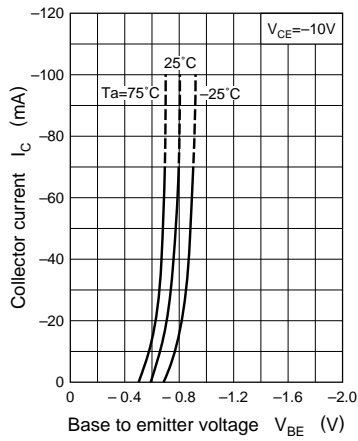
$I_C - I_B$



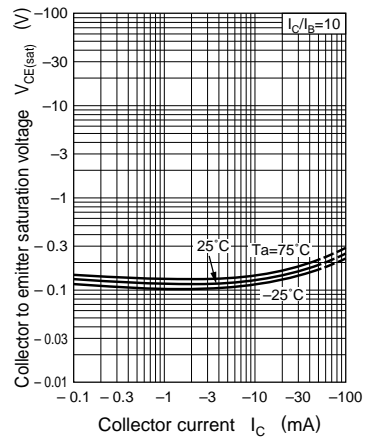
$I_B - V_{BE}$



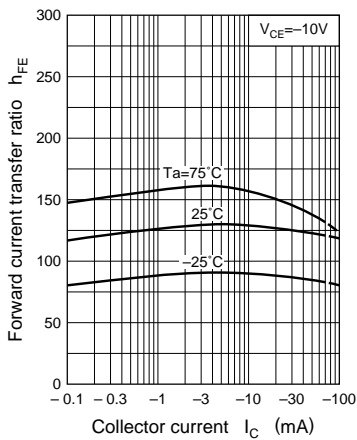
$I_C - V_{BE}$



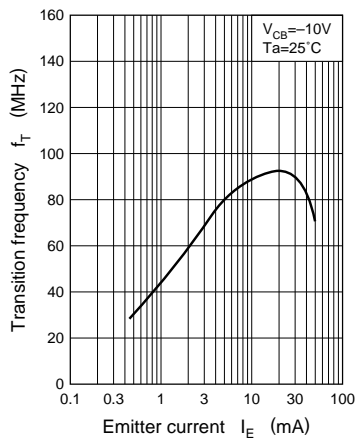
$V_{CE(sat)} - I_C$



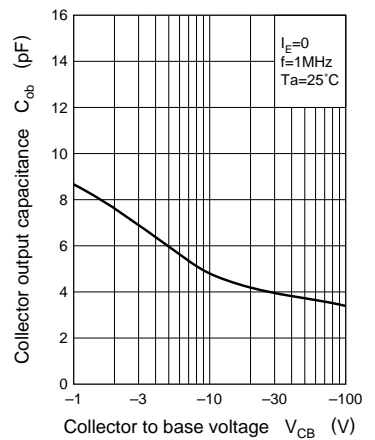
$h_{FE} - I_C$



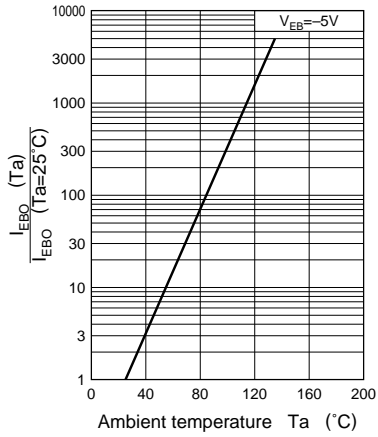
$f_T - I_E$



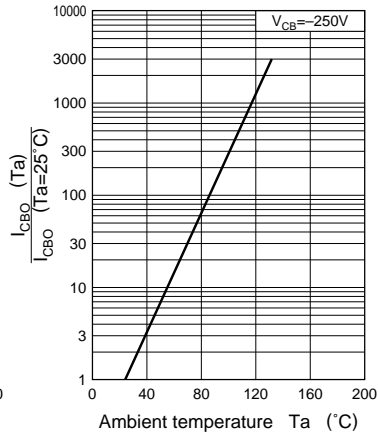
$C_{ob} - V_{CB}$



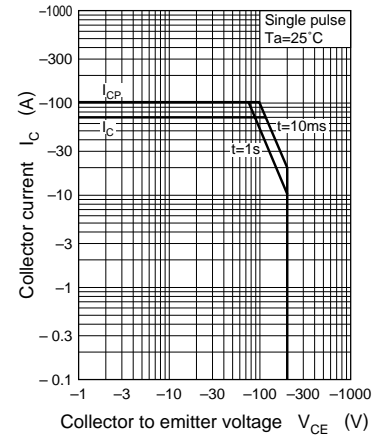
$I_{EBO} - T_a$



$I_{CBO} - T_a$



Area of safe operation (ASO)



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