

# 2SB1592

## Silicon PNP epitaxial planer type

For low-frequency amplification

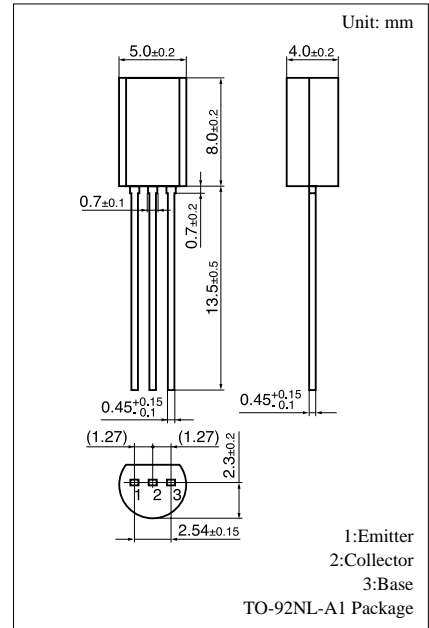
### Features

- 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	$V_{CBO}$	-30	V
Collector to emitter voltage	$V_{CEO}$	-25	V
Emitter to base voltage	$V_{EBO}$	-11	V
Peak collector current	$I_{CP}^*$	-10	A
Collector current	$I_C$	-3	A
Collector power dissipation	$P_C$	1	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 ~ +150	°C

\* Applied are shot pulse of  $\leq 1$ ms width



### Electrical Characteristics (Ta=25°C)

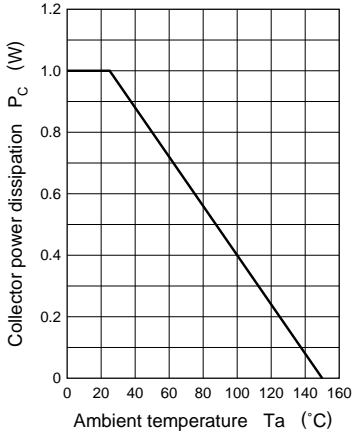
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	$V_{CBO}$	$I_C = -10\mu A, I_E = 0$	-30			V
Collector to emitter voltage	$V_{CEO}$	$I_C = -1mA, I_B = 0$	-25			V
Emitter to base voltage	$V_{EBO}$	$I_E = -10\mu A, I_C = 0$	-11			V
Forward current transfer ratio	$h_{FE}^{*1}$	$V_{CE} = -2V, I_C = -1.4A^{*2}$	90		450	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1.4A, I_B = -25mA^{*2}$		-0.16	-0.22	V
Transition frequency	$f_T$	$V_{CB} = -6V, I_E = 50mA, f = 200MHz$		150		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$			85	pF

\*2 Pulse measurement

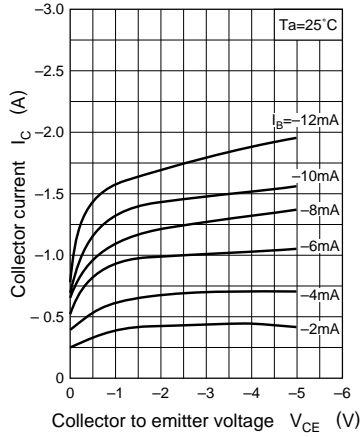
\*1  $h_{FE}$  Rank classification

Rank	Q	R
$h_{FE}$	90 ~ 180	130 ~ 450

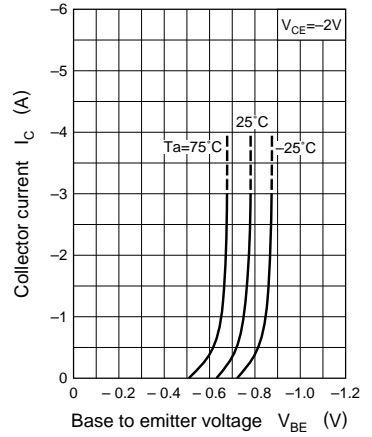
$P_C - T_a$



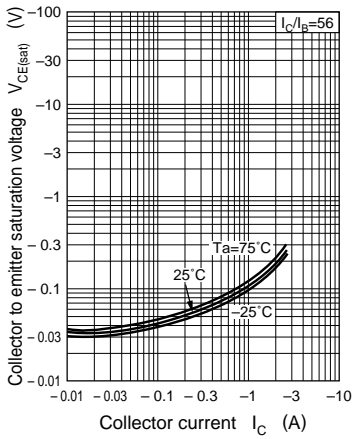
$I_C - V_{CE}$



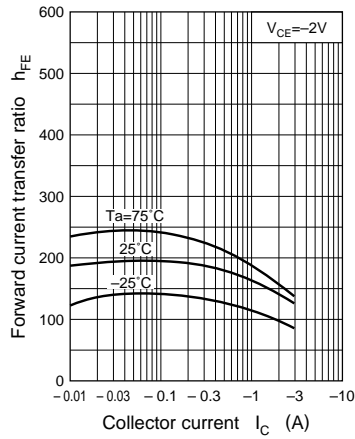
$I_C - V_{BE}$



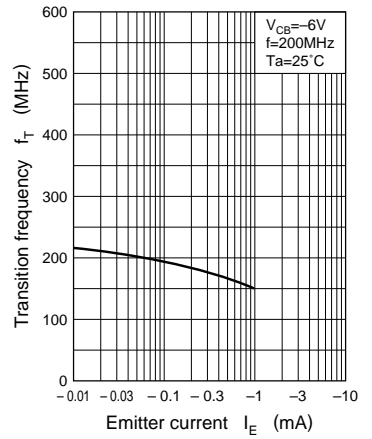
$V_{CE(sat)} - I_C$



$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$

