

# 2SC3313

## Silicon NPN epitaxial planer type

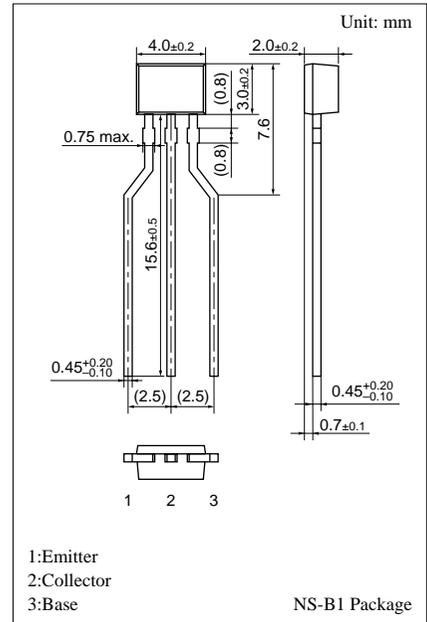
For high-frequency amplification

### ■ Features

- Optimum for high-density mounting.
- Allowing supply with the radial tapping.
- Optimum for RF amplification of FM/AM radios.

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

Parameter	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	30	V
Collector to emitter voltage	$V_{CEO}$	20	V
Emitter to base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	30	mA
Collector power dissipation	$P_C$	300	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 ~ +150	°C



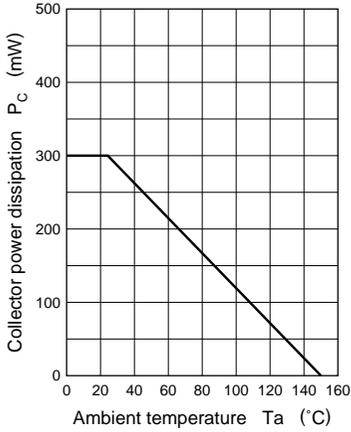
### ■ Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	$V_{CBO}$	$I_C = 10\mu A, I_E = 0$	30			V
Collector to emitter voltage	$V_{CEO}$	$I_C = 2mA, I_B = 0$	20			V
Emitter to base voltage	$V_{EBO}$	$I_E = 10\mu A, I_C = 0$	5			V
Forward current transfer ratio	$h_{FE}^*$	$V_{CE} = 10V, I_C = 1mA$	70		250	
Common emitter reverse transfer capacitance	$C_{re}$	$V_{CE} = 10V, I_C = 1mA, f = 10.7MHz$			1.6	pF
Reverse transfer impedance	$Z_{rb}$	$V_{CB} = 10V, I_E = -1mA, f = 2MHz$			60	$\Omega$
Transition frequency	$f_T$	$V_{CB} = 10V, I_E = -1mA, f = 200MHz$	150	250		MHz

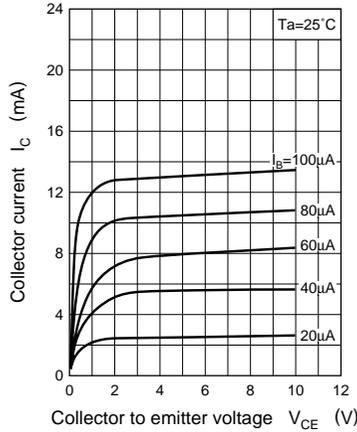
\* $h_{FE}$  Rank classification

Rank	B	C
$h_{FE}$	70 ~ 160	110 ~ 250

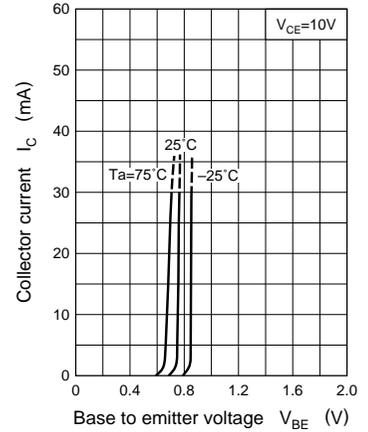
$P_C - T_a$



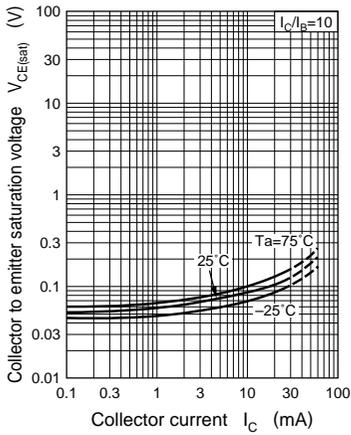
$I_C - V_{CE}$



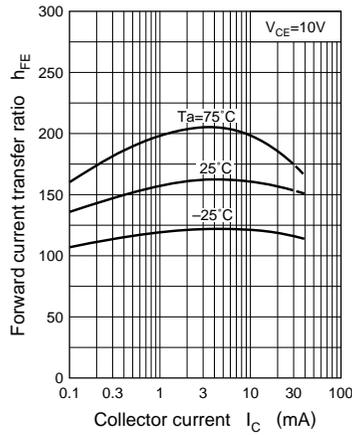
$I_C - V_{BE}$



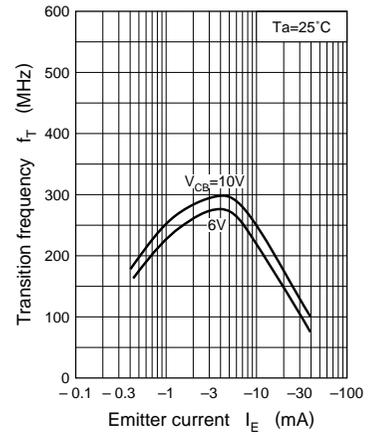
$V_{CE(sat)} - I_C$



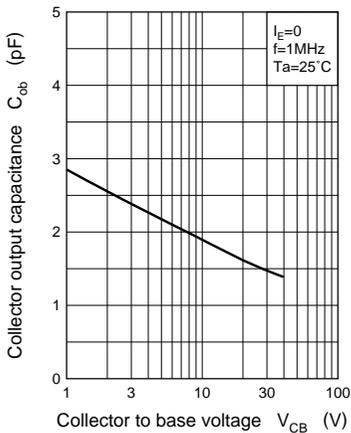
$h_{FE} - I_C$



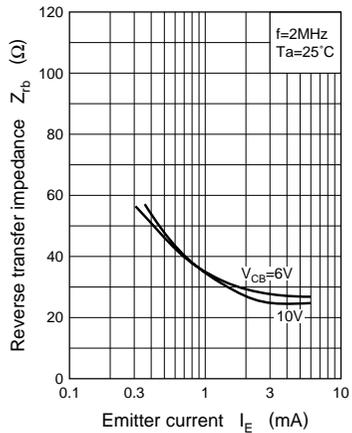
$f_T - I_E$



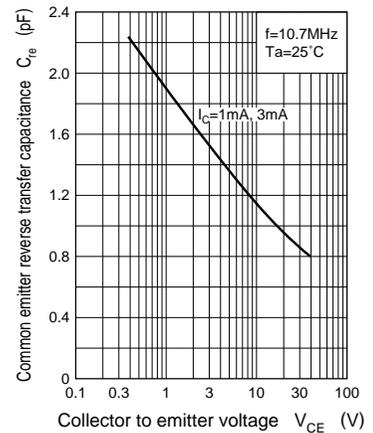
$C_{ob} - V_{CB}$



$Z_{rb} - I_E$



$C_{re} - V_{CE}$



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