

# 2SC2295

## Silicon NPN epitaxial planer type

For high-frequency amplification

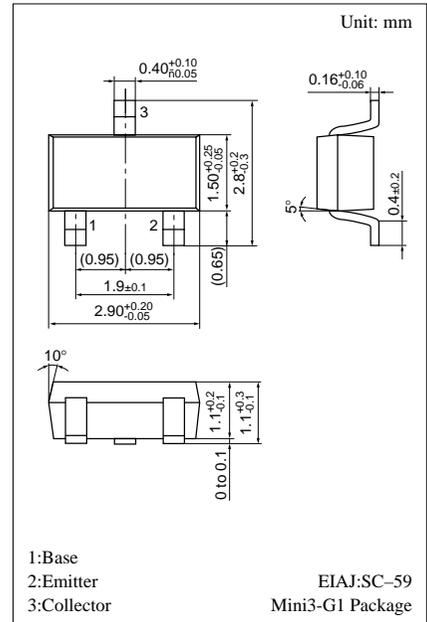
Complementary to 2SA1022

### Features

- Optimum for RF amplification of FM/AM radios.
- High transition frequency  $f_T$ .
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

### Absolute Maximum Ratings ( $T_a=25^\circ\text{C}$ )

Parameter	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	30	V
Collector to emitter voltage	$V_{CEO}$	20	V
Emitter to base voltage	$C_{EBO}$	5	V
Collector current	$I_C$	30	mA
Collector power dissipation	$P_C$	200	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 ~ +150	$^\circ\text{C}$



Marking symbol : V

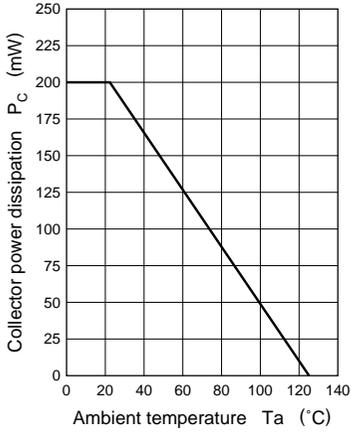
### Electrical Characteristics ( $T_a=25^\circ\text{C}$ )

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 10\text{V}, I_E = 0$			0.1	$\mu\text{A}$
Forward current transfer ratio	$h_{FE}^*$	$V_{CB} = 10\text{V}, I_E = -1\text{mA}$	70		220	
Transition frequency	$f_T$	$V_{CB} = 10\text{V}, I_E = -1\text{mA}, f = 200\text{MHz}$	150	250		MHz
Noise figure	NF	$V_{CB} = 10\text{V}, I_E = -1\text{mA}, f = 5\text{MHz}$		2.8	4	dB
Reverse transfer impedance	$Z_{rb}$	$V_{CB} = 10\text{V}, I_E = -1\text{mA}, f = 2\text{MHz}$		22	50	$\Omega$
Common emitter reverse transfer capacitance	$C_{re}$	$V_{CE} = 10\text{V}, I_C = 1\text{mA}, f = 10.7\text{MHz}$		0.9	1.5	pF

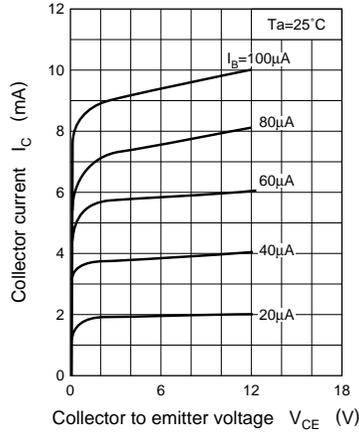
\* $h_{FE}$  Rank classification

Rank	B	C
$h_{FE}$	70 ~ 140	110 ~ 220
Marking Symbol	VB	VC

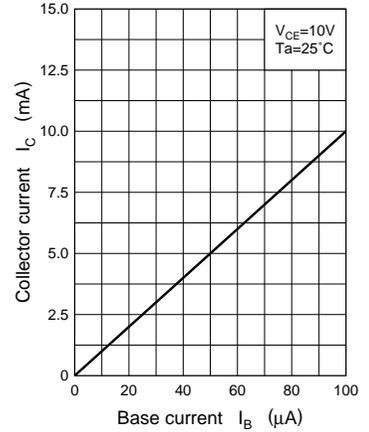
$P_C - T_a$



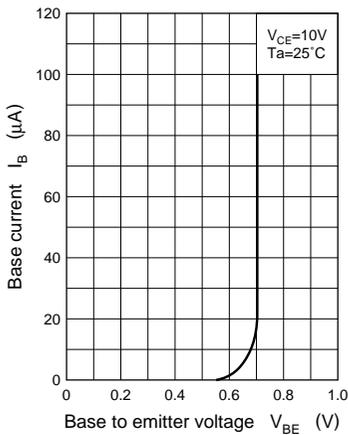
$I_C - V_{CE}$



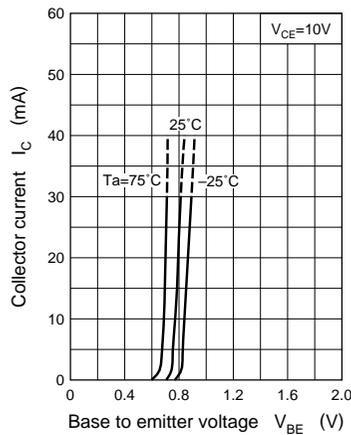
$I_C - I_B$



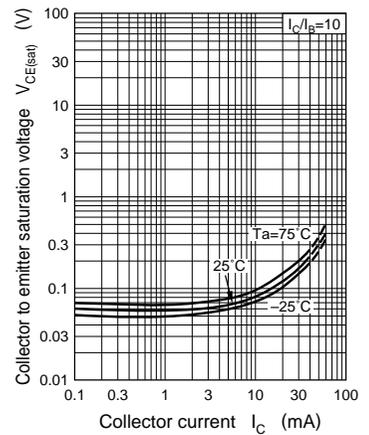
$I_B - V_{BE}$



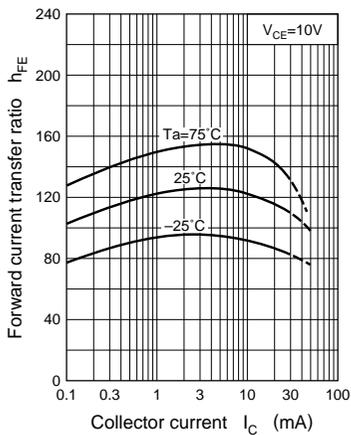
$I_C - V_{BE}$



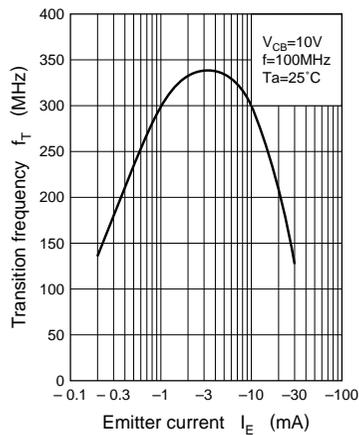
$V_{CE(sat)} - I_C$



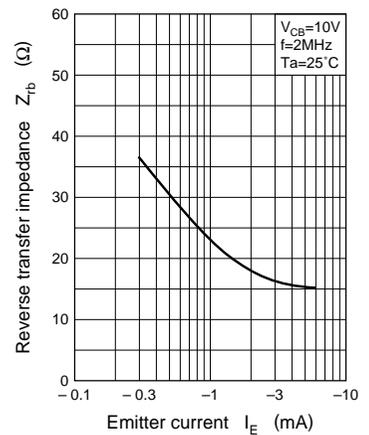
$h_{FE} - I_C$

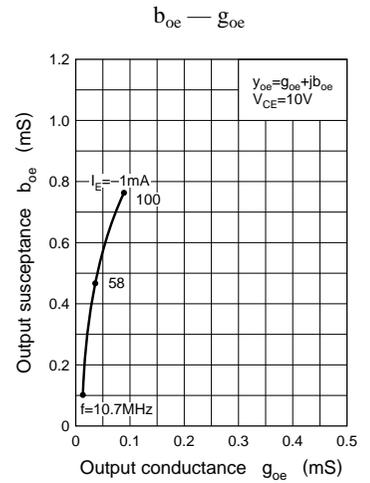
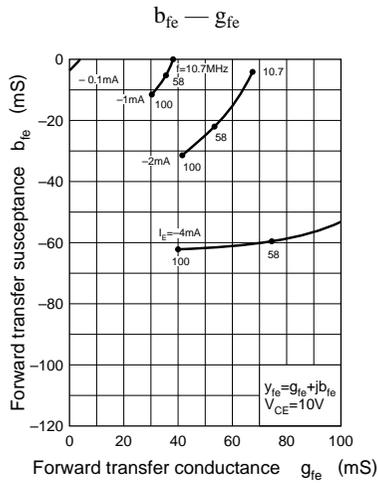
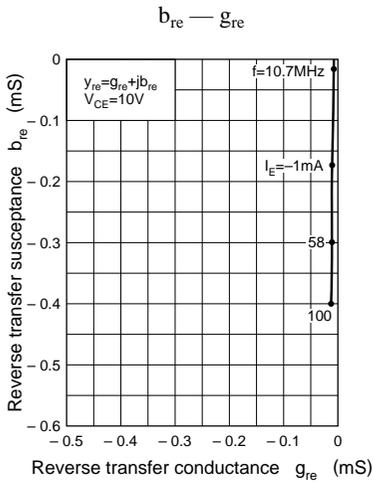
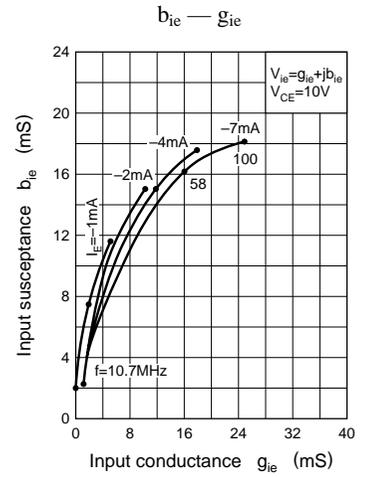
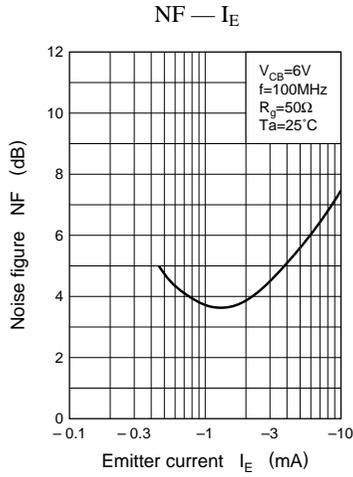
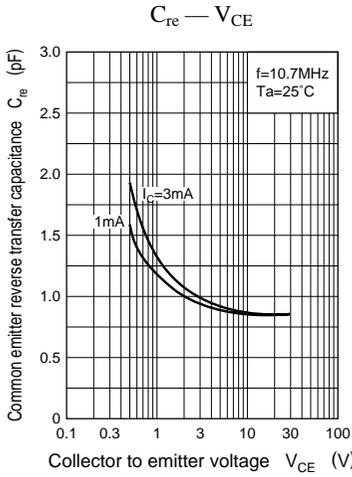


$f_T - I_E$



$Z_{rb} - I_E$





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