

# 2SB1320A

## Silicon PNP epitaxial planer type

For general amplification

Complementary to 2SD1991A

### ■ Features

- High forward current transfer ratio  $h_{FE}$
- Allowing supply with the radial taping

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

Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	-60	V
Collector to emitter voltage	$V_{CEO}$	-50	V
Emitter to base voltage	$V_{EBO}$	-7	V
Peak collector current	$I_{CP}$	-200	mA
Collector current	$I_C$	-100	mA
Collector power dissipation	$P_C$	400	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

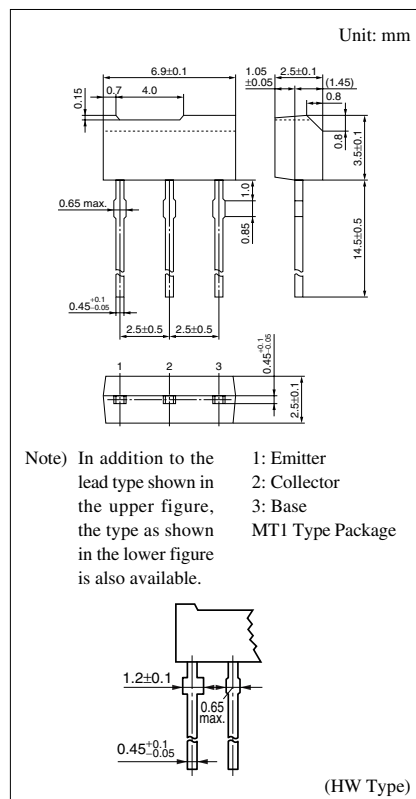
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

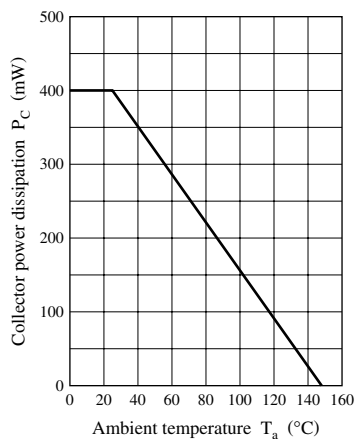
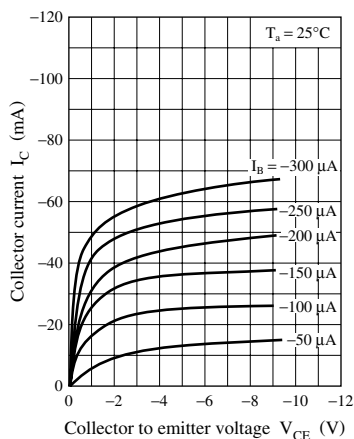
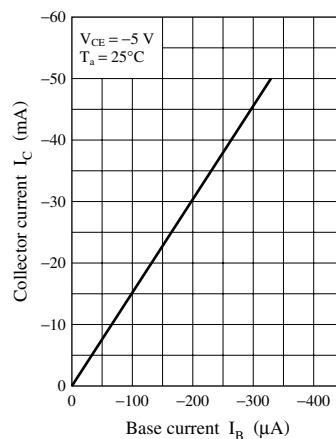
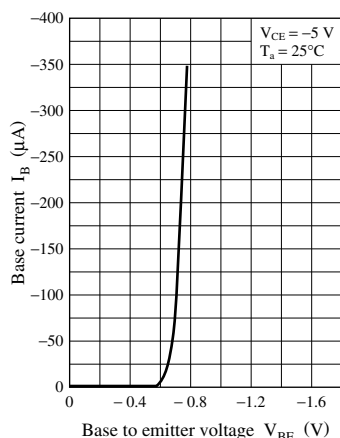
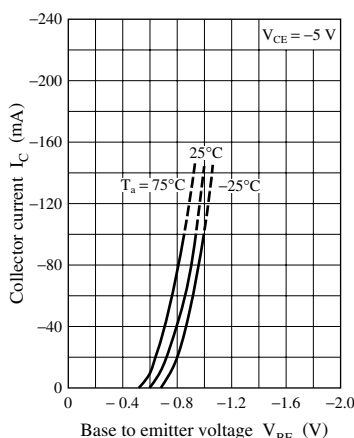
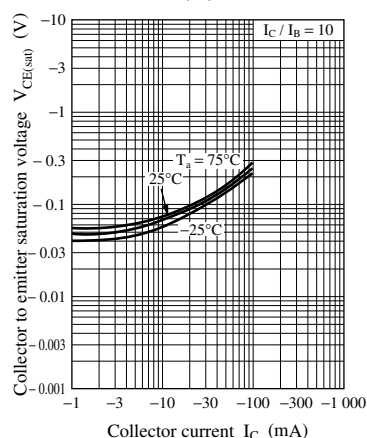
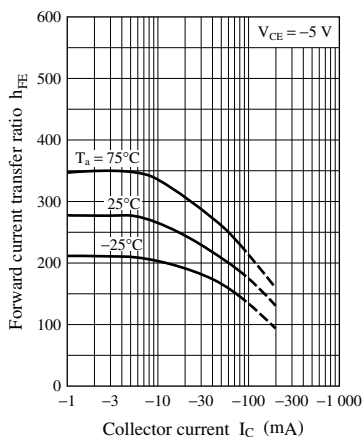
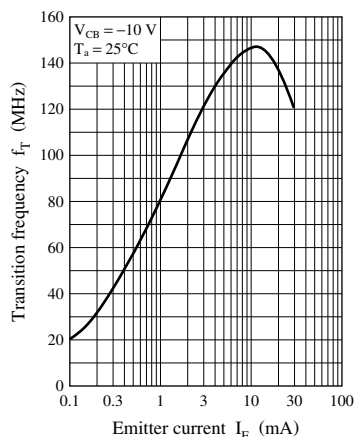
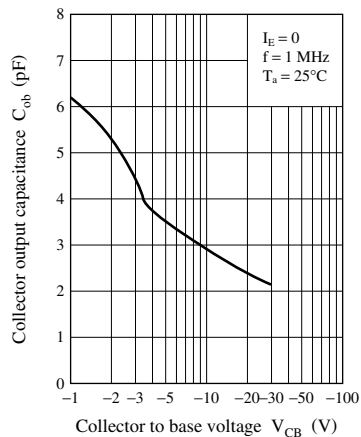
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = -20\text{ V}, I_E = 0$			-1	$\mu\text{A}$
	$I_{CEO}$	$V_{CE} = -20\text{ V}, I_B = 0$			-1	$\mu\text{A}$
Collector to base voltage	$V_{CBO}$	$I_C = -10\text{ }\mu\text{A}, I_E = 0$	-60			V
Collector to emitter voltage	$V_{CEO}$	$I_C = -2\text{ mA}, I_B = 0$	-50			V
Emitter to base voltage	$V_{EBO}$	$I_E = -10\text{ }\mu\text{A}, I_C = 0$	-7			V
Forward current transfer ratio *	$h_{FE}$	$V_{CE} = -10\text{ V}, I_C = -2\text{ mA}$	160		460	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100\text{ mA}, I_B = -10\text{ mA}$			-1	V
Transition frequency	$f_T$	$V_{CB} = -10\text{ V}, I_E = 1\text{ mA}, f = 200\text{ MHz}$		80		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10\text{ V}, I_E = 0, f = 1\text{ MHz}$		3.5		pF

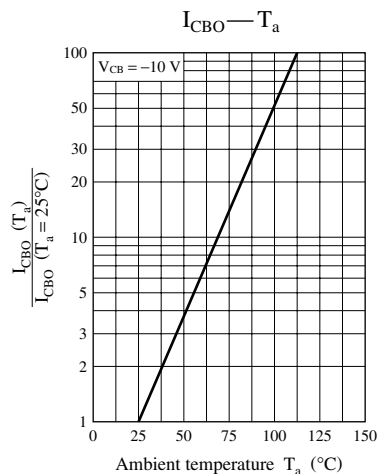
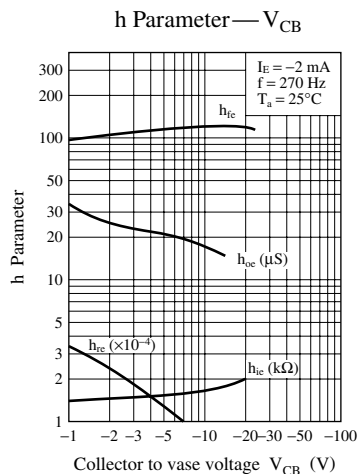
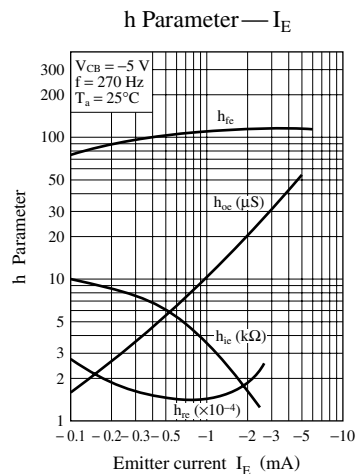
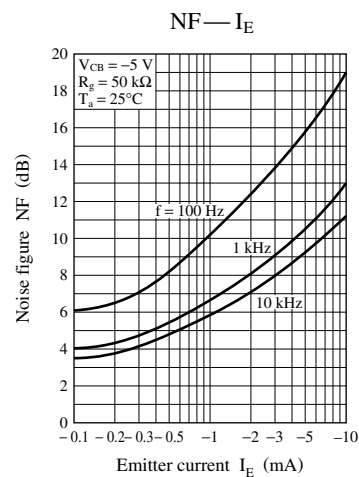
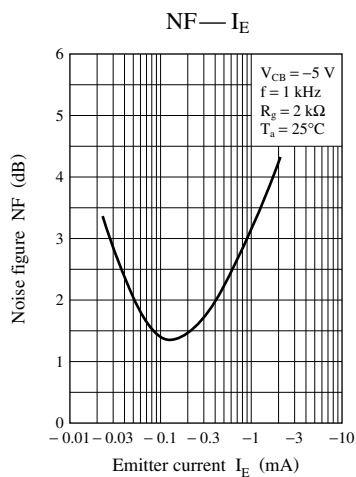
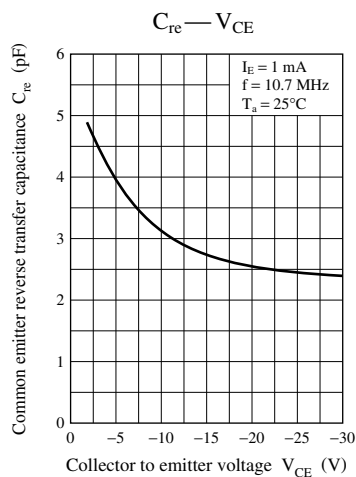
Note) \*: Rank classification

Rank	Q	R	S	No-rank
$h_{FE}$	160 to 260	210 to 340	290 to 460	160 to 460

Product of no-rank is not classified and have no indication for rank.



$P_C - T_a$  $I_C - V_{CE}$  $I_C - I_B$  $I_B - V_{BE}$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_E$  $C_{ob} - V_{CB}$ 



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