2SB1321A

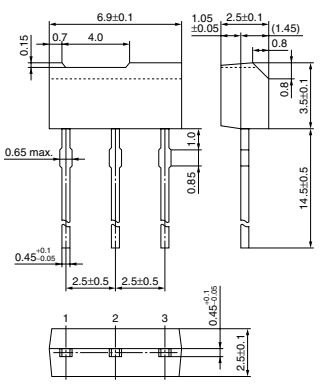
Silicon PNP epitaxial planer type

For general amplification
Complementary to 2SD1992A

■ Features

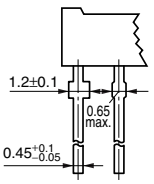
- Large collector power dissipation P_C (600 mW)
- Allowing supply with the radial taping

Unit: mm



Note) In addition to the lead type shown in the upper figure, the type as shown in the lower figure is also available.

1: Emitter
2: Collector
3: Base
MT1 Type Package



(HW Type)

■ Absolute Maximum Ratings $T_a = 25°C$

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}	−1	A
Collector current	I_C	−500	mA
Collector power dissipation	P_C	600	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

■ Electrical Characteristics $T_a = 25°C \pm 3°C$

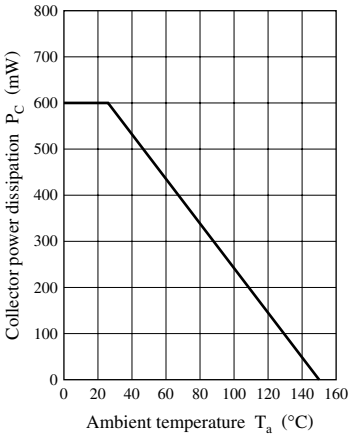
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -20$ V, $I_E = 0$			− 0.1	μA
	I_{CEO}	$V_{CE} = -20$ V, $I_B = 0$			−1	μA
Collector to base voltage	V_{CBO}	$I_C = -10$ μA, $I_E = 0$	−60			V
Collector to emitter voltage	V_{CEO}	$I_C = -2$ mA, $I_B = 0$	−50			V
Emitter to base voltage	V_{EBO}	$I_E = -10$ μA, $I_C = 0$	−7			V
Forward current transfer ratio *1	h_{FE1} *2	$V_{CE} = -10$ V, $I_C = -10$ mA	85		340	
	h_{FE2}	$V_{CE} = -10$ V, $I_C = -500$ mA	40			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -300$ mA, $I_B = -30$ mA		− 0.35	− 0.6	V
Transition frequency	f_T	$V_{CB} = -10$ V, $I_E = 10$ mA, f = 200 MHz		200		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10$ V, $I_E = 0$, f = 1 MHz		6	15	pF

Note) ∗1: Pulse measurement
∗2: Rank classification

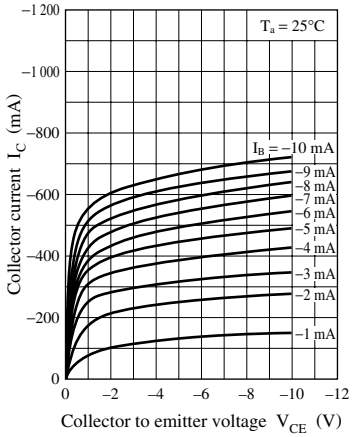
Rank	Q	R	S	No-rank
h_{FE1}	85 to 170	120 to 240	170 to 340	85 to 340

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

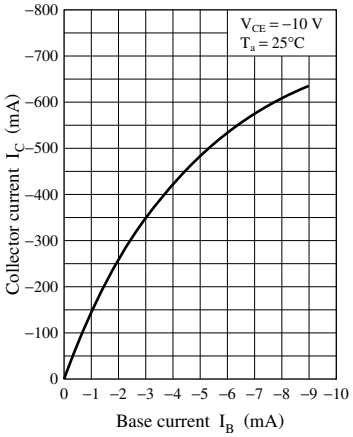
P_C — T_a



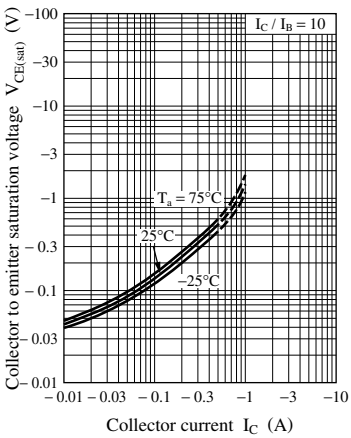
I_C — V_{CE}



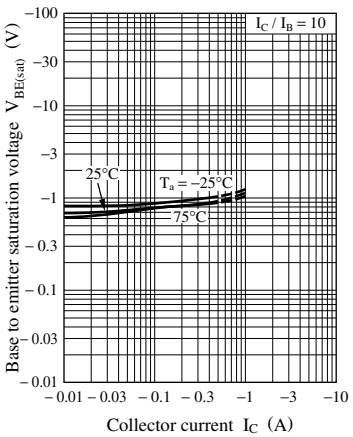
I_C — I_B



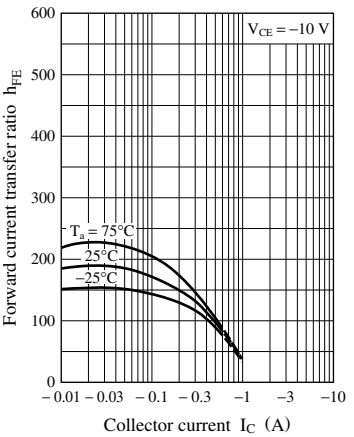
$V_{CE(sat)}$ — I_C



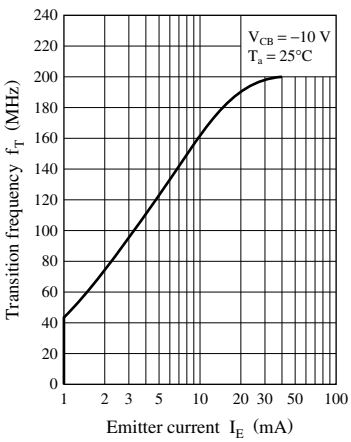
$V_{BE(sat)}$ — I_C



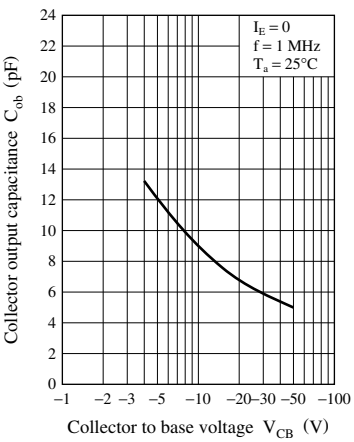
h_{FE} — I_C



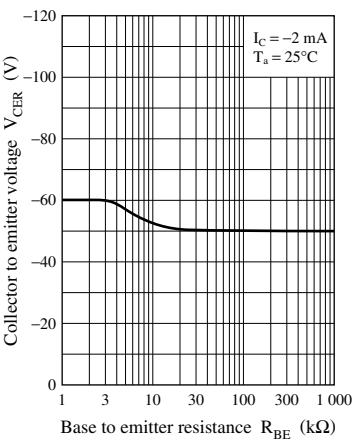
f_T — I_E



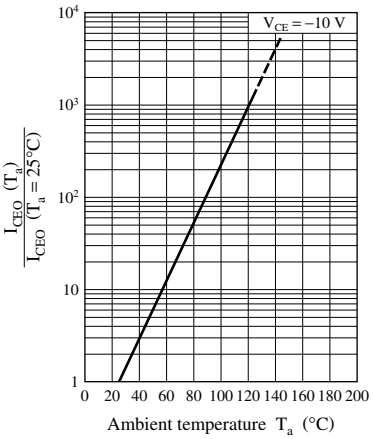
C_{ob} — V_{CB}



V_{CER} — R_{BE}



I_{CEO} — T_a


V_{CE} = −10 V
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120 140 160 180 200
$\frac{I_{CEO}\ (T_a)}{I_{CEO}\ (T_a = 25°C)}$
Ambient temperature T_a (°C)