

2SB1030

Silicon PNP epitaxial planar type

For low-frequency amplification

Complementary to 2SD1423

■ Features

- Optimum for high-density mounting
- Allowing supply with the radial taping

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	-30	V
Collector-emitter voltage (Base open)	V_{CEO}	-25	V
Emitter-base voltage (Collector open)	V_{EBO}	-7	V
Collector current	I_C	-0.5	A
Peak collector current	I_{CP}	-1	A
Collector power dissipation	P_C	300	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

■ Package

- Code
NS-B1
- Pin Name
 1. Emitter
 2. Collector
 3. Base

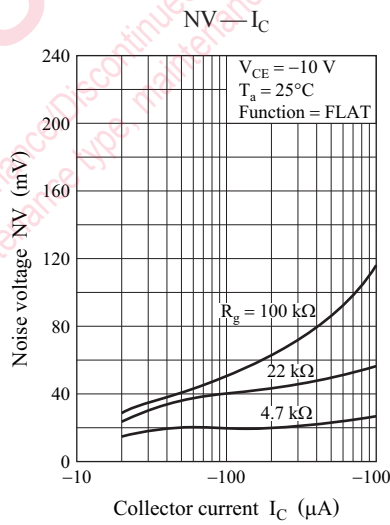
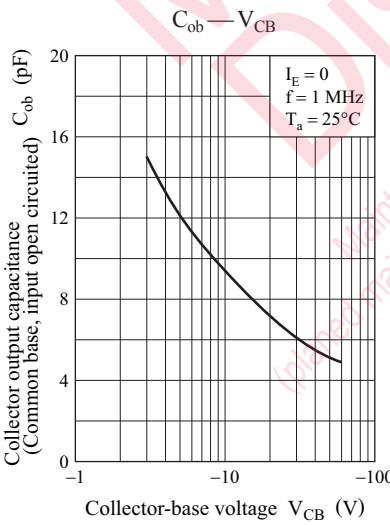
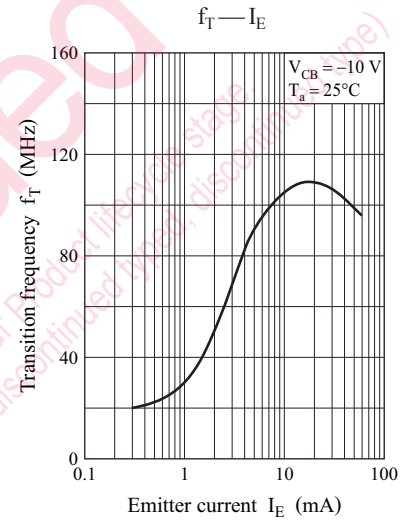
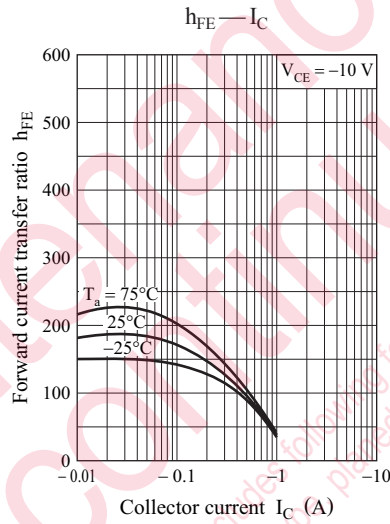
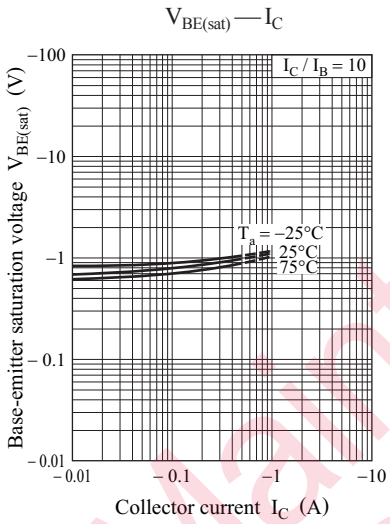
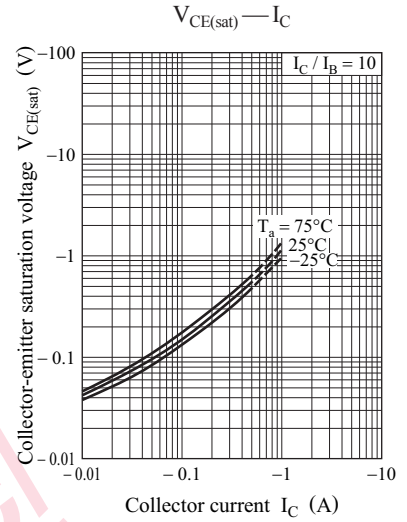
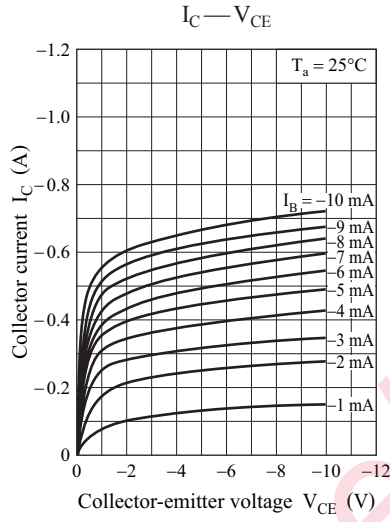
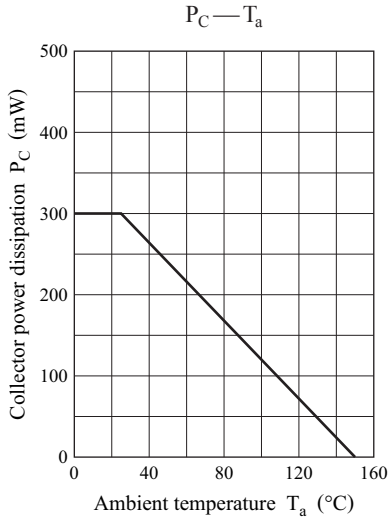
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = -10 \mu\text{A}, I_E = 0$	-30			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -2 \text{ mA}, I_B = 0$	-25			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = -10 \mu\text{A}, I_C = 0$	-7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -20 \text{ V}, I_E = 0$			-0.1	μA
Collector-Emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = -20 \text{ V}, I_B = 0$			-1	μA
Forward current transfer ratio	h_{FE1}^*	$V_{CE} = -10 \text{ V}, I_C = -150 \text{ mA}$	85		340	—
	h_{FE2}	$V_{CE} = -10 \text{ V}, I_C = -500 \text{ A}$	40			—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -300 \text{ mA}, I_B = -30 \text{ mA}$		-0.35	-0.60	V
Transition frequency	f_T	$V_{CB} = -10 \text{ V}, I_E = 50 \text{ mA}, f = 200 \text{ MHz}$		120		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		3.5	15.0	pF

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Rank classification

Rank	Q	R	S
h_{FE1}	85 to 170	120 to 240	170 to 340



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