

# 2SD1423A

## Silicon NPN epitaxial planar type

For low-frequency amplification

Complementary to 2SB1030A

### ■ 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)	$V_{CBO}$	60	V
Collector-emitter voltage (Base open)	$V_{CEO}$	50	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

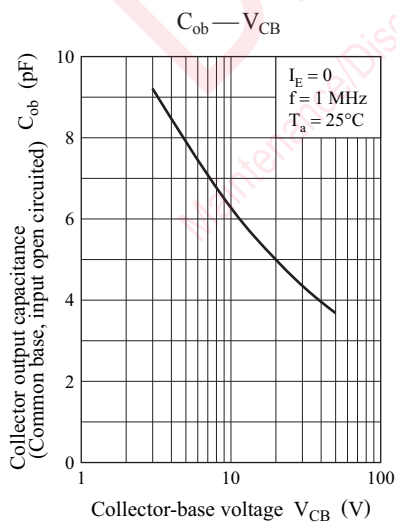
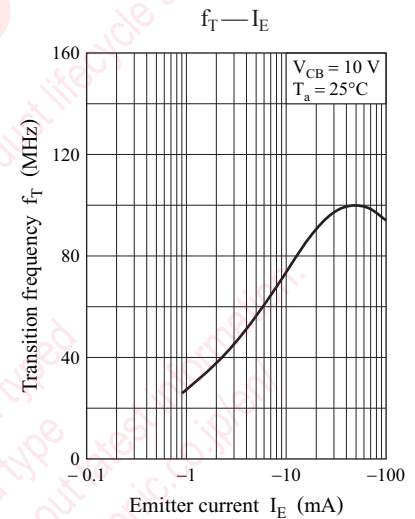
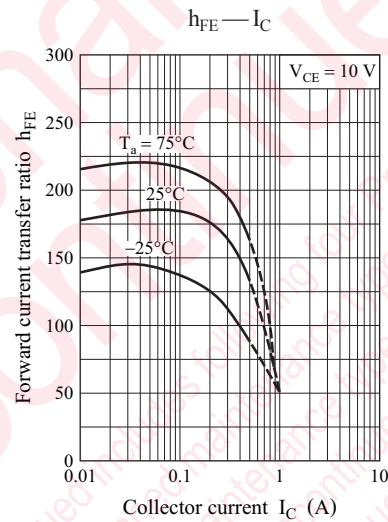
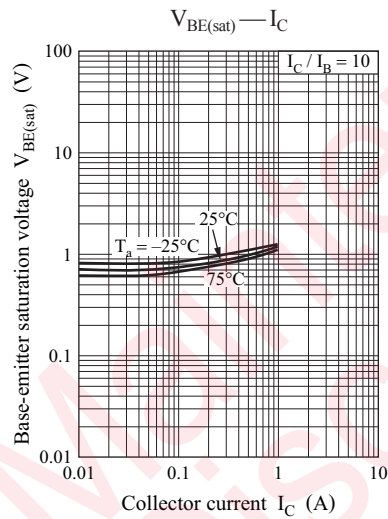
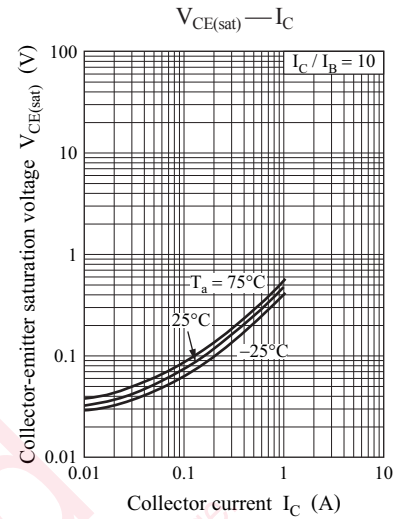
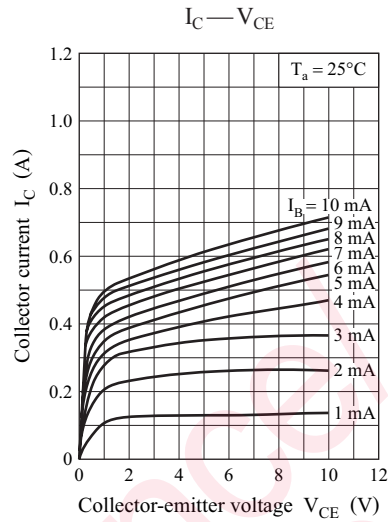
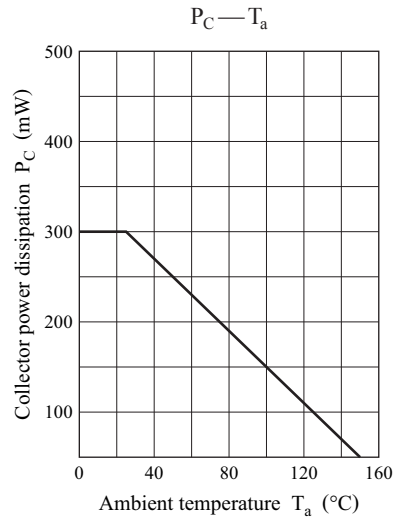
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	$I_C = 10\ \mu\text{A}$ , $I_E = 0$	60			V
Collector-emitter voltage (Base open)	$V_{CEO}$	$I_C = 2\ \text{mA}$ , $I_B = 0$	50			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	$\mu\text{A}$
Collector-emitter cutoff current (Base open)	$I_{CEO}$	$V_{CE} = 20\ \text{V}$ , $I_B = 0$			1	$\mu\text{A}$
Forward current transfer ratio	$h_{FE1}^*$	$V_{CE} = 10\ \text{V}$ , $I_C = 150\ \text{mA}$	85		340	—
	$h_{FE2}$	$V_{CE} = 10\ \text{V}$ , $I_C = 500\ \text{mA}$	40			—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 300\ \text{mA}$ , $I_B = 30\ \text{mA}$			0.6	V
Transition frequency	$f_T$	$V_{CB} = 10\ \text{V}$ , $I_E = -50\ \text{mA}$ , $f = 200\ \text{MHz}$		200		MHz
Collector output capacitance (Common base, input open circuited)	$C_{ob}$	$V_{CB} = 10\ \text{V}$ , $I_E = 0$ , $f = 1\ \text{MHz}$		6	15	pF

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

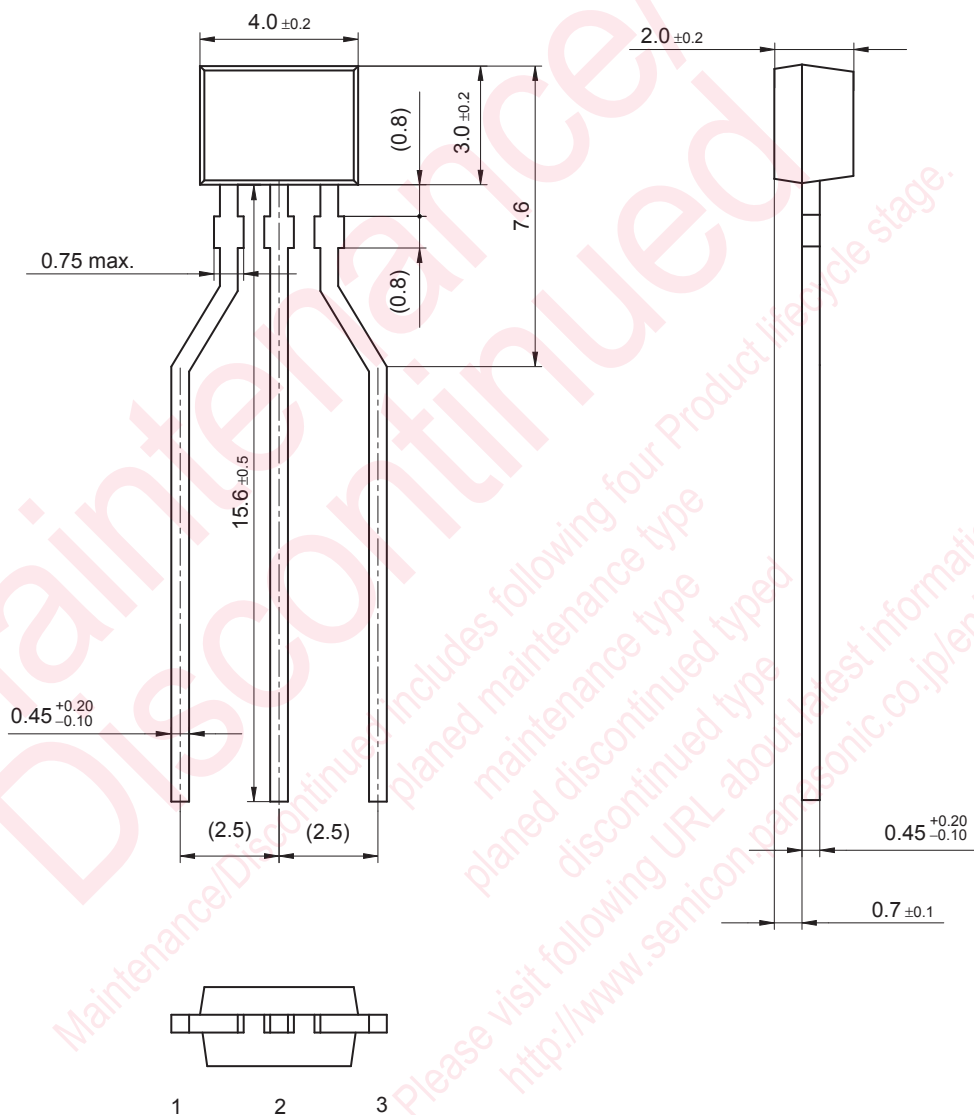
2. \*: Rank classification

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



NS-B1

Unit: mm



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