

# 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)	$V_{\text{CBO}}$	60	V
Collector-emitter voltage (Base open)	$V_{\text{CEO}}$	50	V
Emitter-base voltage (Collector open)	$V_{\text{EBO}}$	7	V
Collector current	$I_{\text{C}}$	0.5	A
Peak collector current	$I_{\text{CP}}$	1	A
Collector power dissipation	$P_{\text{C}}$	300	mW
Junction temperature	$T_{\text{j}}$	150	$^\circ\text{C}$
Storage temperature	$T_{\text{stg}}$	-55 to +150	$^\circ\text{C}$

### ■ Package

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

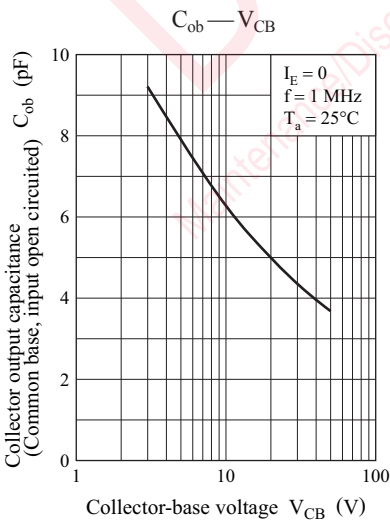
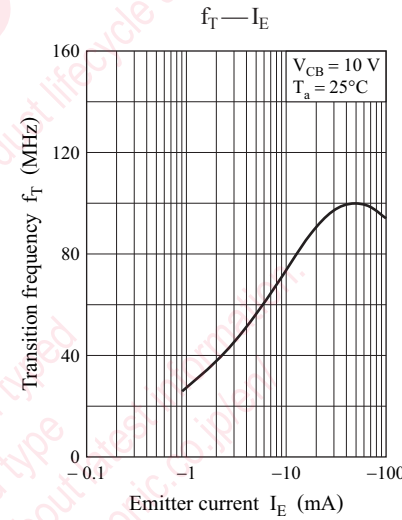
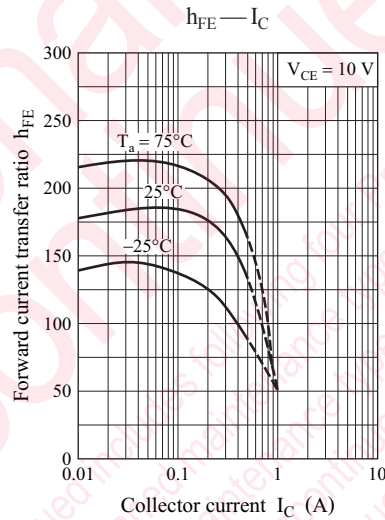
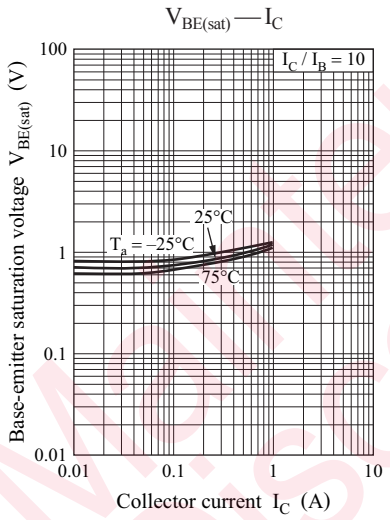
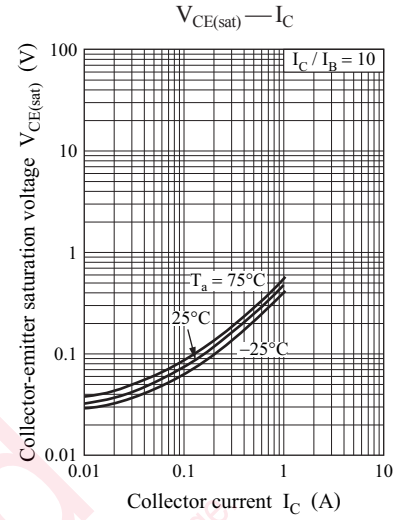
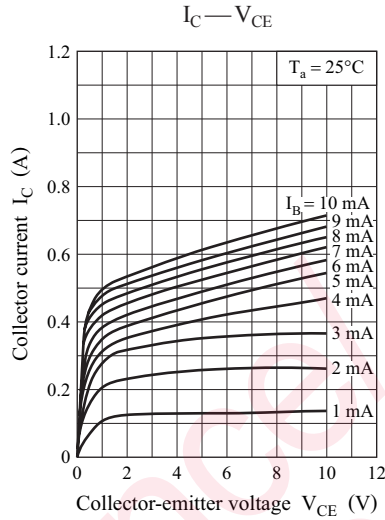
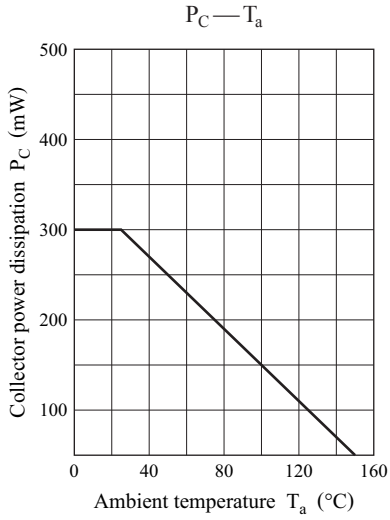
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	$V_{\text{CBO}}$	$I_{\text{C}} = 10 \mu\text{A}, I_{\text{E}} = 0$	60			V
Collector-emitter voltage (Base open)	$V_{\text{CEO}}$	$I_{\text{C}} = 2 \text{ mA}, I_{\text{B}} = 0$	50			V
Emitter-base voltage (Collector open)	$V_{\text{EBO}}$	$I_{\text{E}} = 10 \mu\text{A}, I_{\text{C}} = 0$	7			V
Collector-base cutoff current (Emitter open)	$I_{\text{CBO}}$	$V_{\text{CB}} = 20 \text{ V}, I_{\text{E}} = 0$			0.1	$\mu\text{A}$
Collector-emitter cutoff current (Base open)	$I_{\text{CEO}}$	$V_{\text{CE}} = 20 \text{ V}, I_{\text{B}} = 0$			1	$\mu\text{A}$
Forward current transfer ratio	$h_{\text{FE1}}^*$	$V_{\text{CE}} = 10 \text{ V}, I_{\text{C}} = 150 \text{ mA}$	85		340	—
	$h_{\text{FE2}}$	$V_{\text{CE}} = 10 \text{ V}, I_{\text{C}} = 500 \text{ mA}$	40			—
Collector-emitter saturation voltage	$V_{\text{CE(sat)}}$	$I_{\text{C}} = 300 \text{ mA}, I_{\text{B}} = 30 \text{ mA}$			0.6	V
Transition frequency	$f_{\text{T}}$	$V_{\text{CB}} = 10 \text{ V}, I_{\text{E}} = -50 \text{ mA}, f = 200 \text{ MHz}$		200		MHz
Collector output capacitance (Common base, input open circuited)	$C_{\text{ob}}$	$V_{\text{CB}} = 10 \text{ V}, I_{\text{E}} = 0, f = 1 \text{ MHz}$		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
$h_{\text{FE1}}$	85 to 170	120 to 240	170 to 340





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