

# UP04401

## Silicon PNP epitaxial planar transistor

For general amplification

### ■ Features

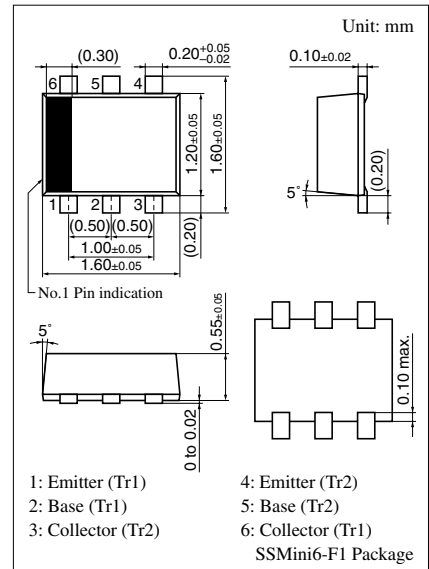
- Two elements incorporated into one package (Each transistor is separated)
- Reduction of the mounting area and assembly cost by one half

### ■ Basic Part Number of Element

- 2SB0709A (2SB709A) × 2 elements

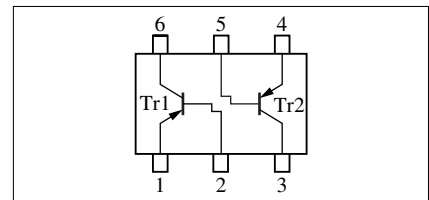
### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

	Parameter	Symbol	Rating	Unit
Rating of element	Collector to base voltage	$V_{\text{CBO}}$	-60	V
	Collector to emitter voltage	$V_{\text{CEO}}$	-50	V
	Emitter to base voltage	$V_{\text{EBO}}$	-7	V
	Collector current	$I_{\text{C}}$	-100	mA
	Peak collector current	$I_{\text{CP}}$	-200	mA
Total	Total power dissipation	$P_{\text{T}}$	125	mW
	Junction temperature	$T_{\text{j}}$	125	$^\circ\text{C}$
	Storage temperature	$T_{\text{stg}}$	-55 to +125	$^\circ\text{C}$



Marking Symbol: 5K

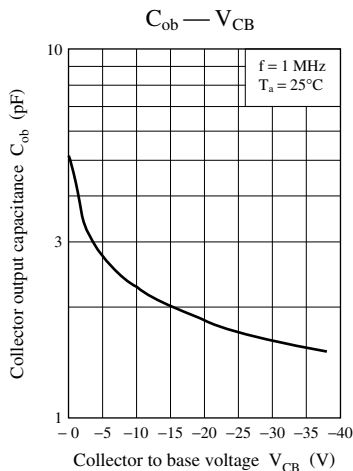
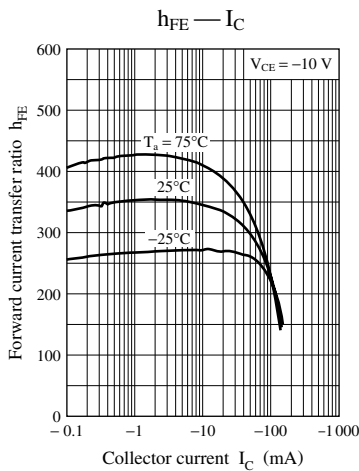
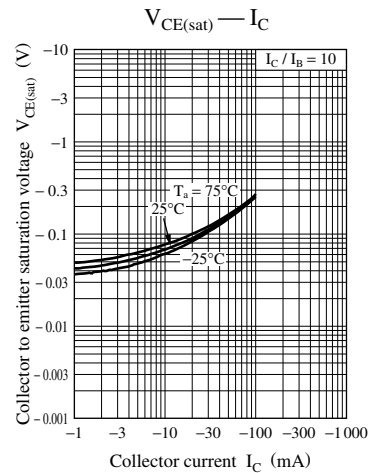
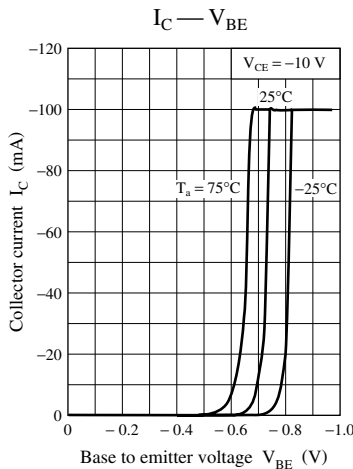
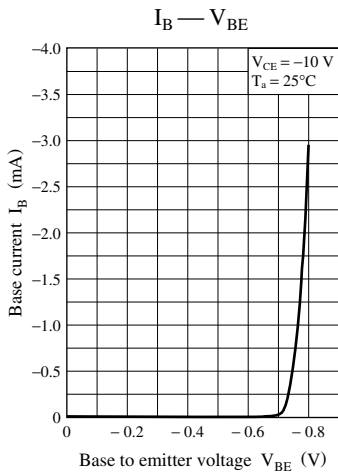
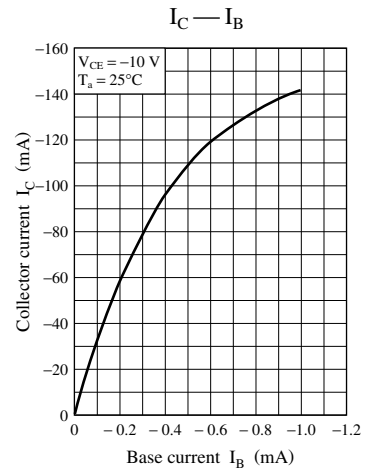
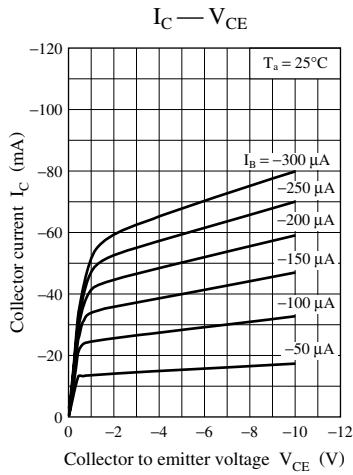
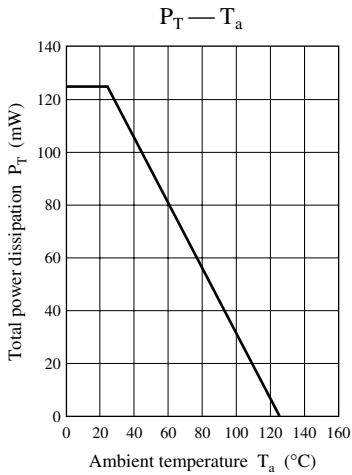
Internal Connection



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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector to base voltage	$V_{\text{CBO}}$	$I_{\text{C}} = -10 \mu\text{A}, I_{\text{E}} = 0$	-60			V
Collector to emitter voltage	$V_{\text{CEO}}$	$I_{\text{C}} = -2 \text{mA}, I_{\text{B}} = 0$	-50			V
Emitter to base voltage	$V_{\text{EBO}}$	$I_{\text{E}} = -10 \mu\text{A}, I_{\text{C}} = 0$	-7			V
Collector cutoff current	$I_{\text{CBO}}$	$V_{\text{CB}} = -20 \text{V}, I_{\text{E}} = 0$			-0.1	$\mu\text{A}$
	$I_{\text{CEO}}$	$V_{\text{CE}} = -10 \text{V}, I_{\text{B}} = 0$			-100	
Forward current transfer ratio	$h_{\text{FE}}$	$V_{\text{CE}} = -10 \text{V}, I_{\text{C}} = -2 \text{mA}$	180		390	—
Collector to emitter saturation voltage	$V_{\text{CE(sat)}}$	$I_{\text{C}} = -100 \text{mA}, I_{\text{B}} = -10 \text{mA}$		-0.3	-0.5	V
Collector output capacitance	$C_{\text{ob}}$	$V_{\text{CB}} = -10 \text{V}, I_{\text{E}} = 0, f = 1 \text{MHz}$		2.7		pF
Gain bandwidth product	$f_{\text{T}}$	$V_{\text{CB}} = -10 \text{V}, I_{\text{E}} = 1 \text{mA}, f = 200 \text{MHz}$		80		MHz

Note) The part number in the parenthesis shows conventional part number.



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