

# 2SA0720

## Silicon PNP epitaxial planar type

For low-frequency power amplification and driver amplification

Complementary to 2SC1318

### ■ Features

- Complementary pair with 2SC1318

### ■ 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)	$V_{EBO}$	-5	V
Collector current	$I_C$	-500	mA
Peak collector current	$I_{CP}$	-1	A
Collector power dissipation	$P_C$	625	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

### ■ Package

- Code  
TO-92B-B1
- Pin Name
  1. Emitter
  2. Collector
  3. Base

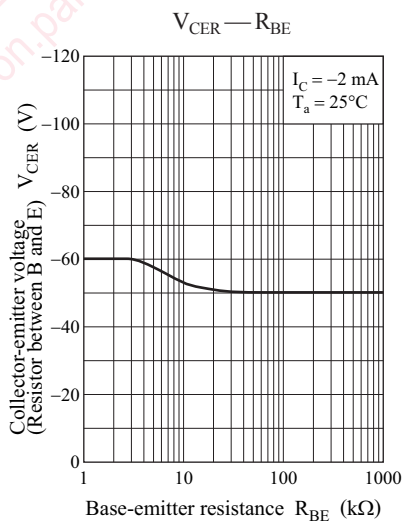
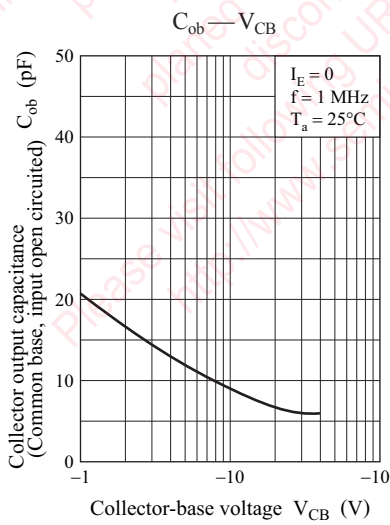
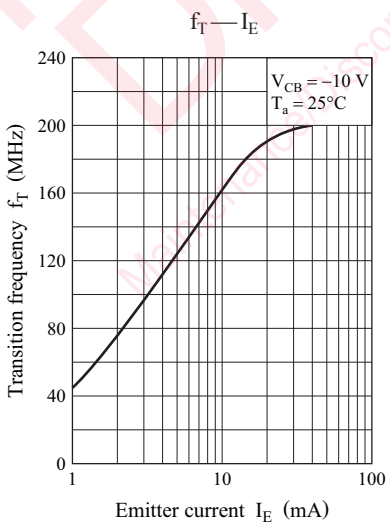
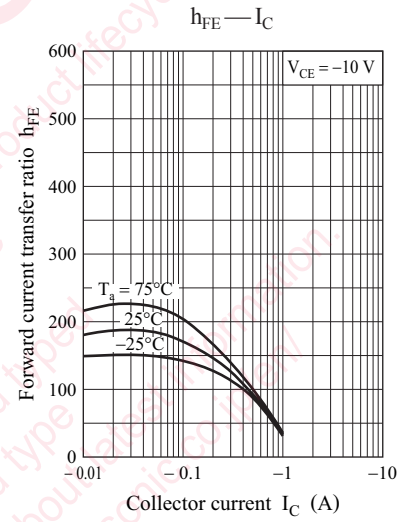
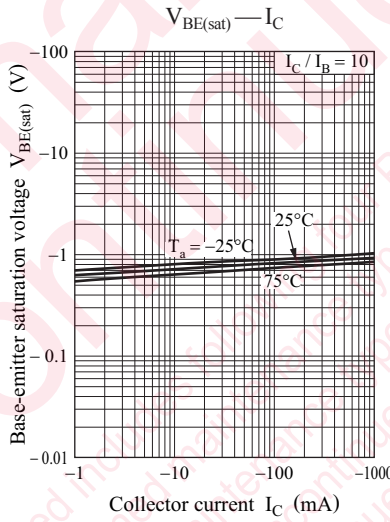
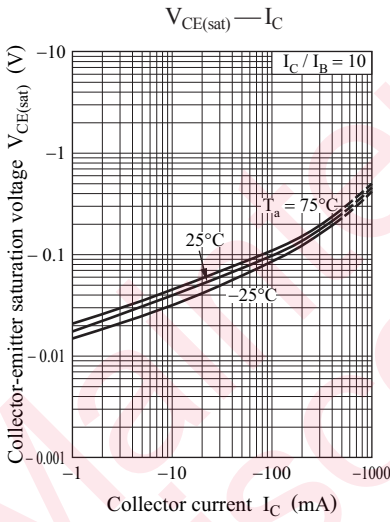
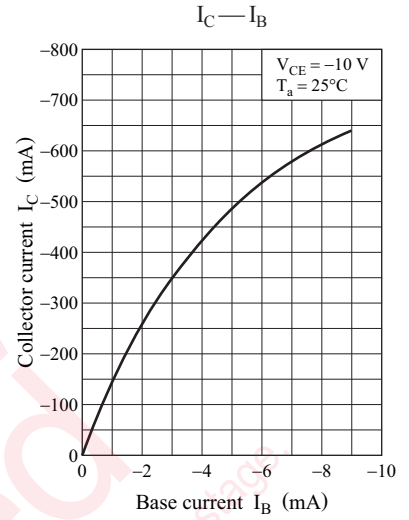
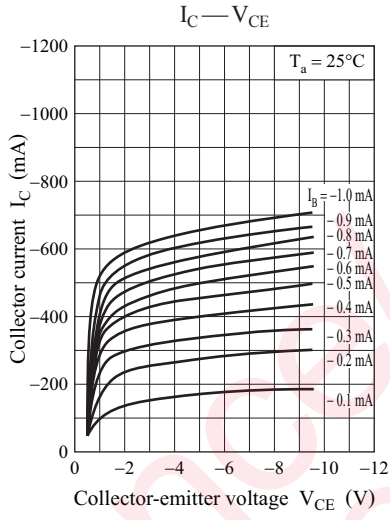
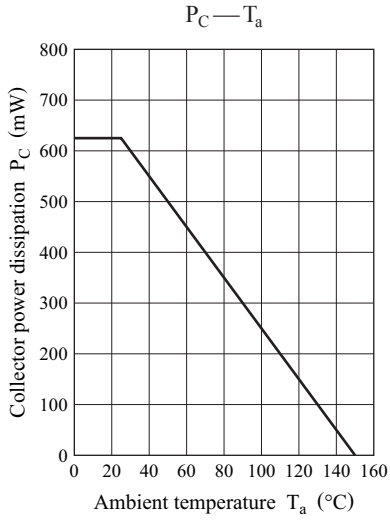
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

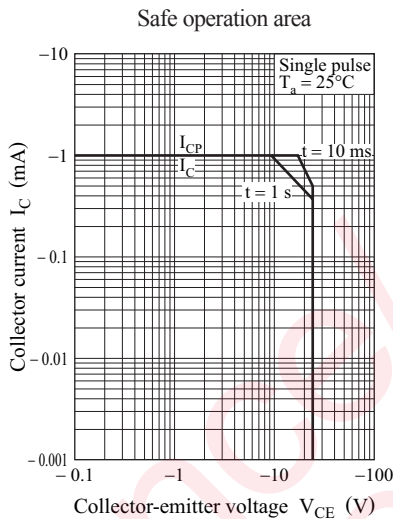
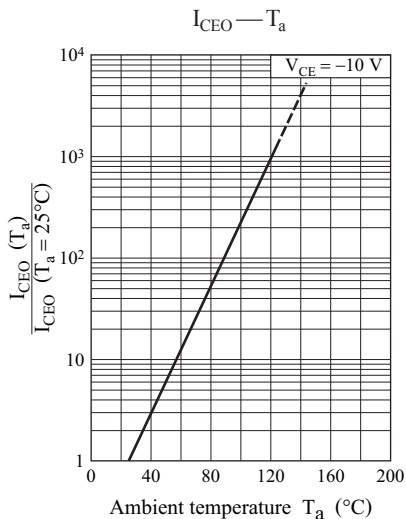
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	$I_C = -10 \mu\text{A}, I_E = 0$	-60			V
Collector-emitter voltage (Base open)	$V_{CEO}$	$I_C = -10 \text{mA}, I_B = 0$	-50			V
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = -10 \mu\text{A}, I_C = 0$	-5			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = -20 \text{V}, I_E = 0$			-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	$V_{CE(sat)}$	$I_C = -300 \text{mA}, I_B = -30 \text{mA}$		-0.35	-0.60	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -300 \text{mA}, I_B = -30 \text{mA}$		-1.1	-1.5	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)	$C_{re}$	$V_{CB} = -10 \text{V}, I_E = 0, f = 1 \text{MHz}$		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





Maintenance/Discontinued

Maintenance/Discontinued includes following four Product lifecycle stage.

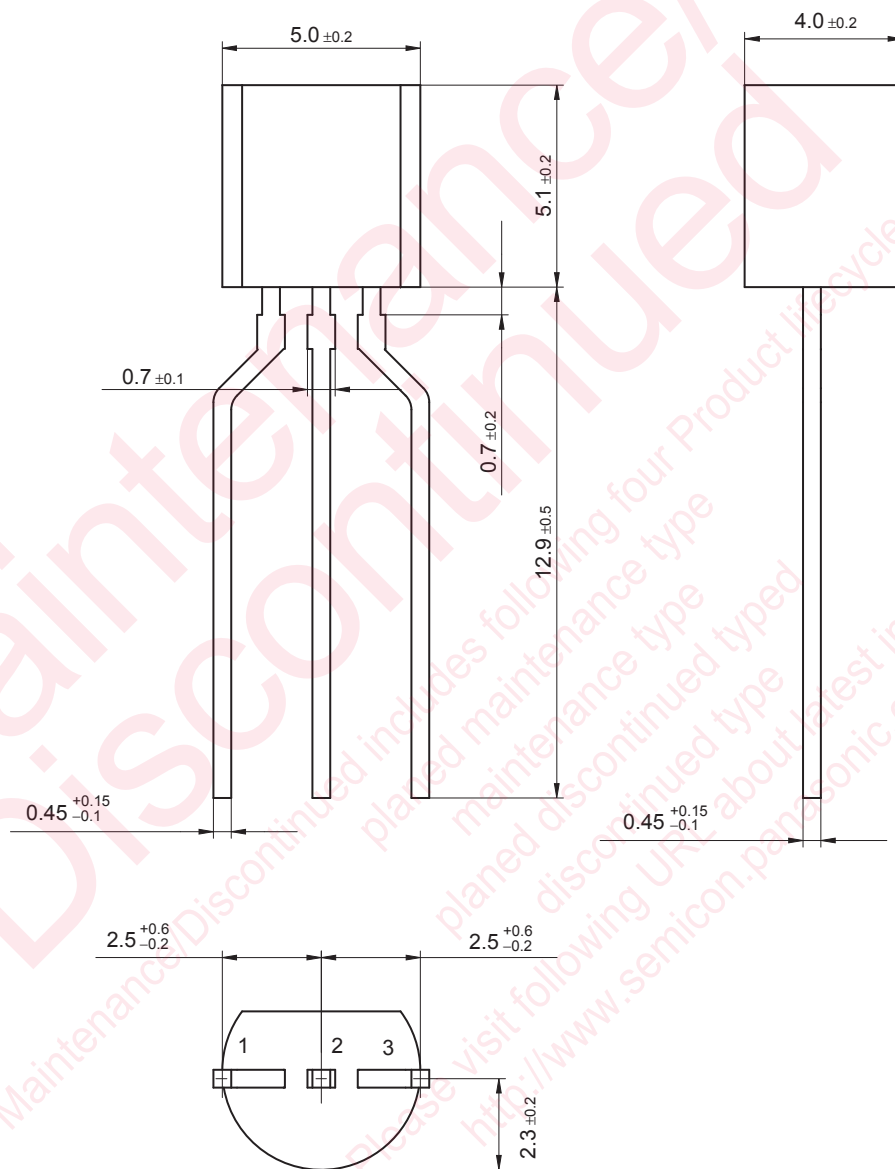
- planned maintenance type
- planned discontinued type
- discontinued type

Please visit following URL about latest information.

<http://www.semicon.panasonic.co.jp/en/>

TO-92-B1

Unit: mm



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