

# 2SB0710 (2SB710), 2SB0710A (2SB710A)

## Silicon PNP epitaxial planar type

For general amplification

Complementary to 2SD0602 (2SD602), 2SD0602A (2SD602A)

### ■ Features

- Large collector current  $I_C$
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	-30	V
	2SB0710A	-60	
Collector-emitter voltage (Base open)	$V_{CEO}$	-25	V
	2SB0710A	-50	
Emitter-base voltage (Collector open)	$V_{EBO}$	-5	V
Collector current	$I_C$	-0.5	A
Peak collector current	$I_{CP}$	-1	A
Collector power dissipation	$P_C$	200	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

### ■ 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
	2SB0710A		-60			
Collector-emitter voltage (Base open)	$V_{CEO}$	$I_C = -10 \text{mA}$ , $I_B = 0$	-25			V
	2SB0710A		-50			
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 *1	$h_{FE1}$ *2	$V_{CE} = -10 \text{V}$ , $I_C = -150 \text{mA}$	85		340	—
	$h_{FE2}$	$V_{CE} = -10 \text{V}$ , $I_C = -500 \text{mA}$	40			—
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	$I_C = -300 \text{mA}$ , $I_B = -30 \text{mA}$		-0.35	-0.60	V
Base-emitter saturation voltage *1	$V_{BE(sat)}$	$I_C = -300 \text{mA}$ , $I_B = -30 \text{mA}$		-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)	$C_{ob}$	$V_{CB} = -10 \text{V}$ , $I_E = 0$ , $f = 1 \text{MHz}$		6	15	pF

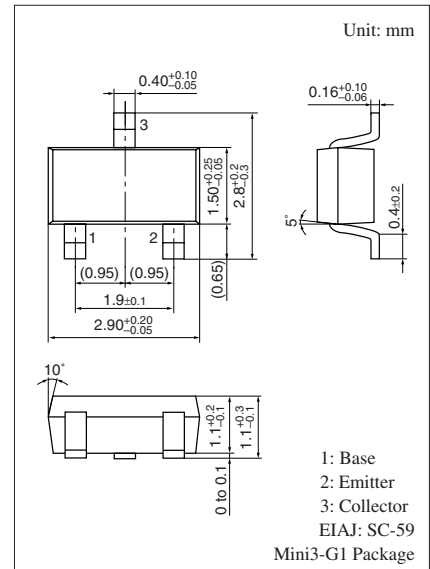
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*1: Pulse measurement

\*2: Rank classification

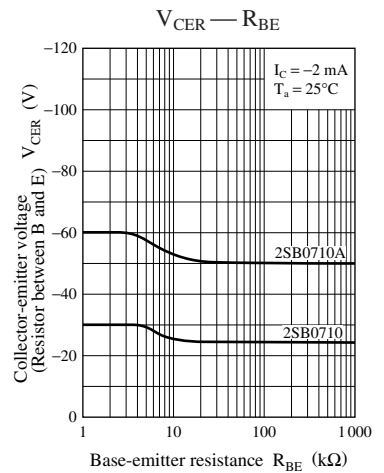
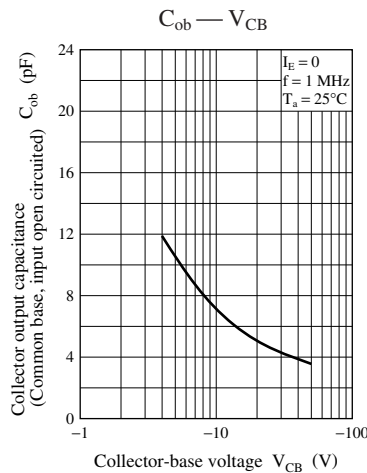
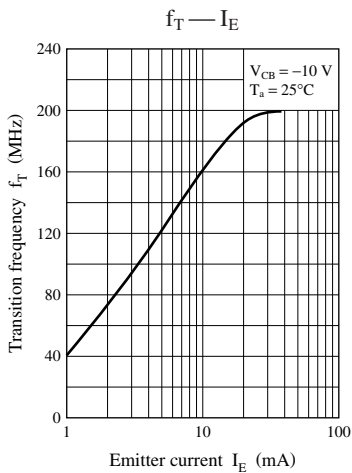
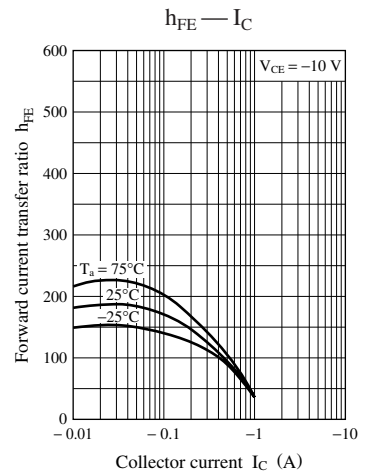
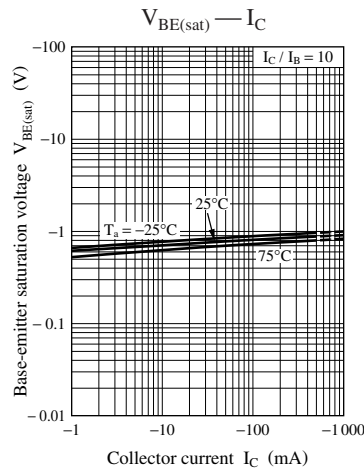
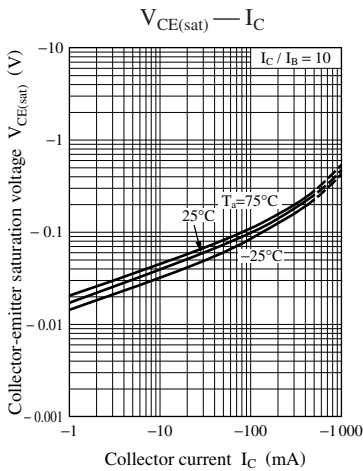
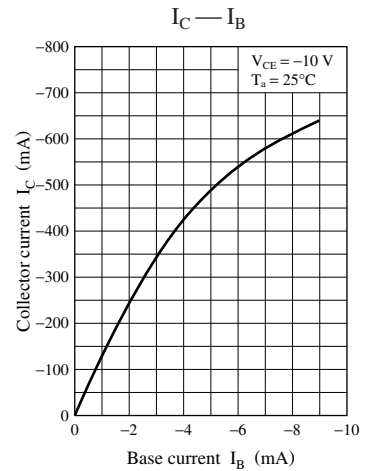
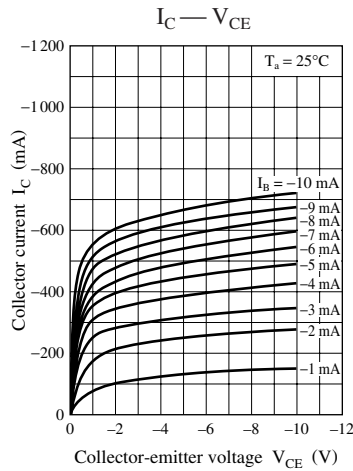
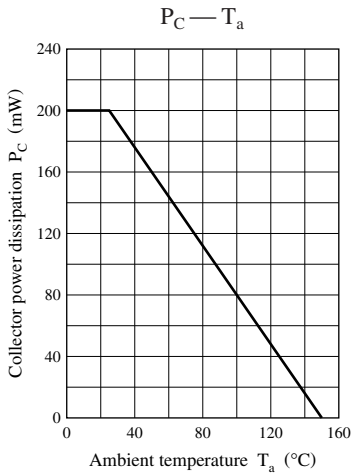
Rank	Q	R	S	No-rank
$h_{FE1}$	85 to 170	120 to 240	170 to 340	85 to 340
Marking symbol	2SB0710 CQ	CR	CS	C
	2SB0710A DQ	DR	DS	D

Note) The part numbers in the parenthesis show conventional part number.



Marking Symbol:

- 2SB0710: C
- 2SB0710A: D



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