

# 2SB0710, 2SB0710A

## Silicon PNP epitaxial planer type

For general amplification

Complementary to 2SD0602 and 2SD0602A

### ■ 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 to base voltage	2SB0710	-30	V
	2SB0710A	-60	
Collector to emitter voltage	2SB0710	-25	V
	2SB0710A	-50	
Emitter to base voltage	$V_{EBO}$	-5	V
Peak collector current	$I_{CP}$	-1	A
Collector current	$I_C$	-500	mA
Collector power dissipation	$P_C$	200	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

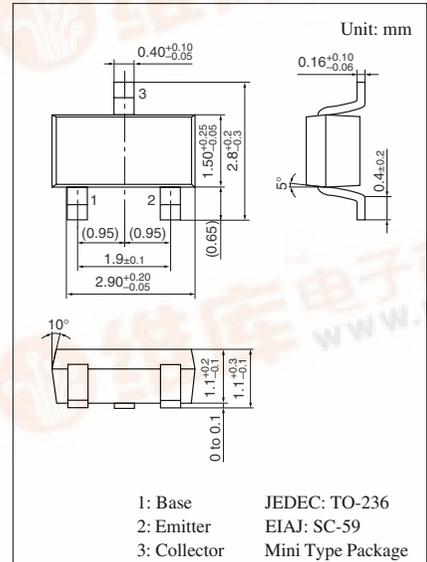
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = -20\text{ V}, I_E = 0$			-0.1	$\mu\text{A}$
Collector to base voltage	2SB0710	$I_C = -10\ \mu\text{A}, I_E = 0$	-30			V
	2SB0710A		-60			
Collector to emitter voltage	2SB0710	$I_C = -10\ \text{mA}, I_B = 0$	-25			V
	2SB0710A		-50			
Emitter to base voltage	$V_{EBO}$	$I_E = -10\ \mu\text{A}, I_C = 0$	-5			V
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 to emitter saturation voltage *1	$V_{CE(sat)}$	$I_C = -300\ \text{mA}, I_B = -30\ \text{mA}$		-0.35	-0.6	V
Base to 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	$C_{ob}$	$V_{CB} = -10\ \text{V}, I_E = 0, f = 1\ \text{MHz}$		6	15	pF

Note) \*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	2SB0710	CQ	CR	CS	C
Symbol	2SB0710A	DQ	DR	DS	D



### Marking Symbol

- 2SB0710 : C
- 2SB0710A : D

Product of no-rank is not classified and have no indication for rank.

