

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

Silicon PNP epitaxial planer type

For general amplification

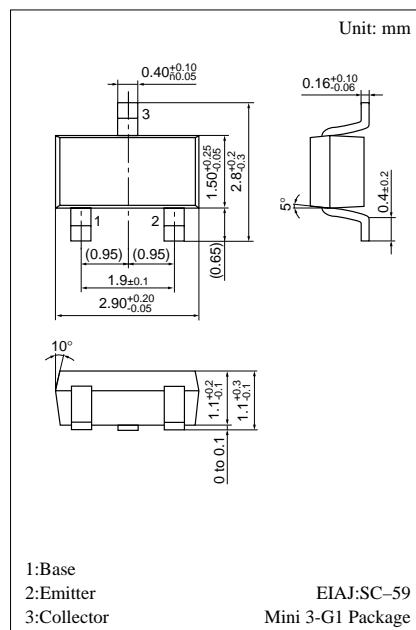
Complementary to 2SD0602 (2SD602) and 2SD0602A (2SD602A)

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	Ratings	Unit
Collector to base voltage	V_{CBO}	–30	V
		–60	
Collector to emitter voltage	V_{CEO}	–25	V
		–50	
Emitter to base voltage	V_{EBO}	–5	V
Peak collector current	I_{CP}	–1	A
Collector current	I_C	–0.5	A
Collector power dissipation	P_C	200	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	–55 ~ +150	$^\circ\text{C}$



Marking symbol : C(2SB0710)
D(2SB0710A)

Electrical Characteristics ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -20\text{V}, I_E = 0$			–0.1	μA
Collector to base voltage	V_{CBO}	$I_C = -10\mu\text{A}, I_E = 0$	–30			V
			–60			
Collector to emitter voltage	V_{CEO}	$I_C = -10\text{mA}, I_B = 0$	–25			V
			–50			
Emitter to base voltage	V_{EBO}	$I_E = -10\mu\text{A}, I_C = 0$	–5			V
Forward current transfer ratio	h_{FE1}^{*1}	$V_{CE} = -10\text{V}, I_C = -150\text{mA}^{*2}$	85		340	
	h_{FE2}	$V_{CE} = -10\text{V}, I_C = -500\text{mA}^{*2}$	40			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -300\text{mA}, I_B = -30\text{mA}^{*2}$		–0.35	–0.6	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = -300\text{mA}, I_B = -30\text{mA}^{*2}$		–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

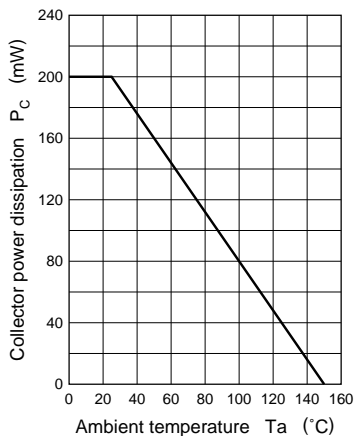
^{*1} h_{FE1} Rank classification

^{*2} Pulse measurement

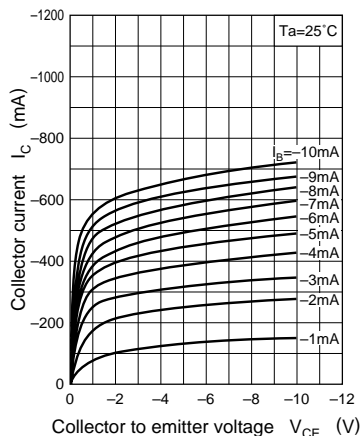
Rank	Q	R	S
h_{FE1}	85 ~ 170	120 ~ 240	170 ~ 340
Marking Symbol	2SB0710	CQ	CR
	2SB0710A	DQ	DR

Note.) The Part numbers in the Parenthesis show conventional part number.

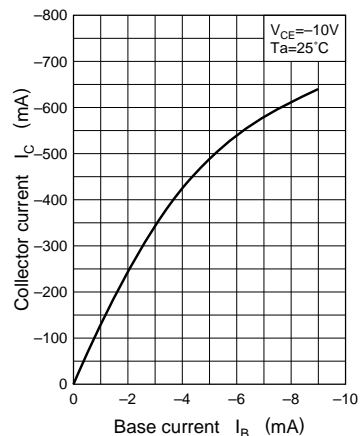
$P_C - T_a$



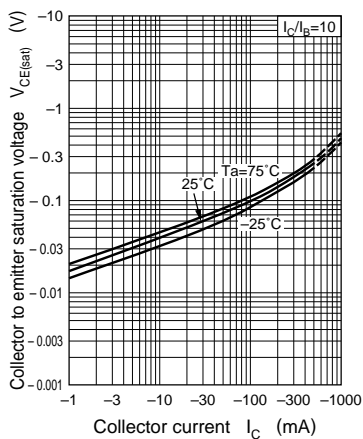
$I_C - V_{CE}$



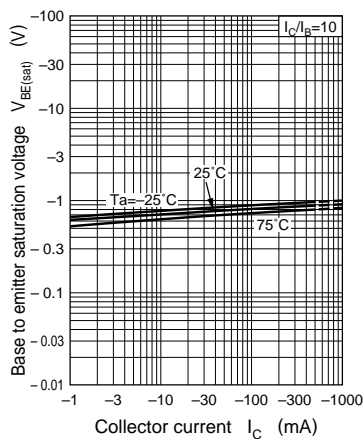
$I_C - I_B$



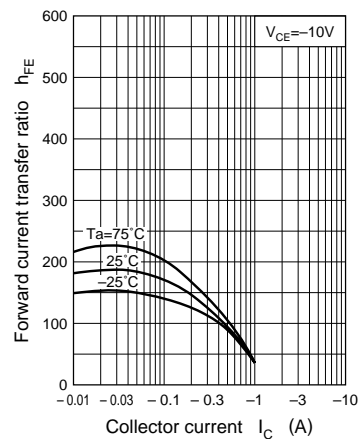
$V_{CE(sat)} - I_C$



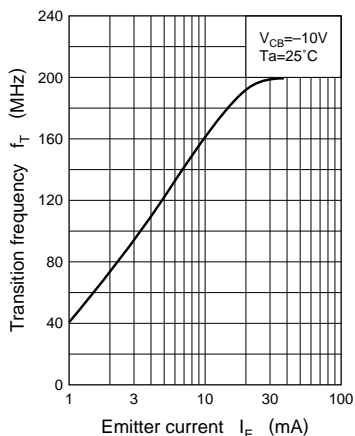
$V_{BE(sat)} - I_C$



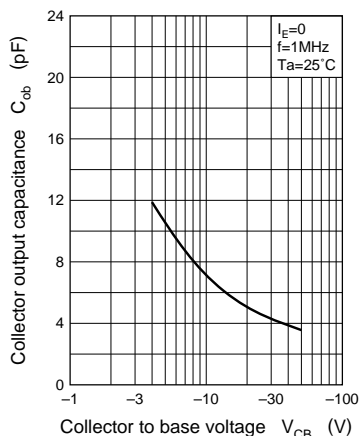
$h_{FE} - I_C$



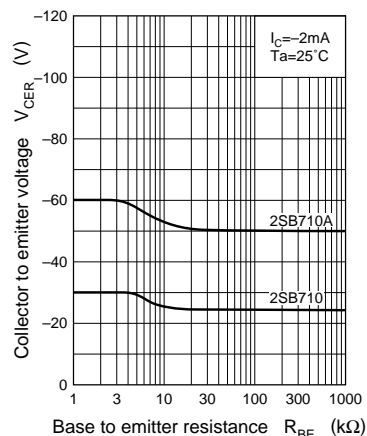
$f_T - I_E$



$C_{ob} - V_{CB}$



$V_{CER} - R_{BE}$



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