

XN01457

Silicon PNP epitaxial planar type

For general amplification

■ Features

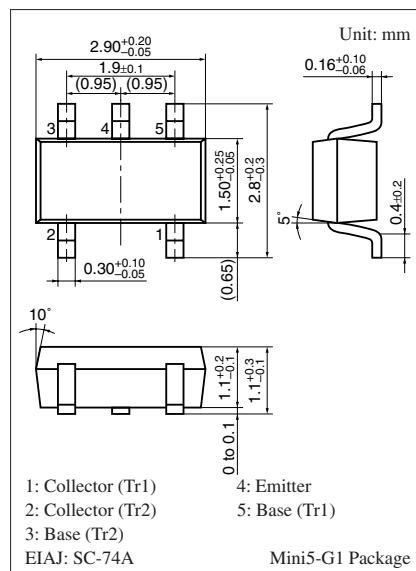
- Two elements incorporated into one package (Emitter-coupled transistors)
- Reduction of the mounting area and assembly cost by one half

■ Basic Part Number

- 2SB1693 × 2

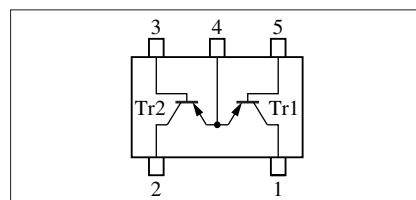
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	-40	V
Collector-emitter voltage (Base open)	V_{CEO}	-20	V
Emitter-base voltage (Collector open)	V_{EBO}	-15	V
Collector current	I_C	-0.5	A
Peak collector current	I_{CP}	-1	A
Total power dissipation	P_T	300	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



Marking Symbol: 4Y

Internal Connection



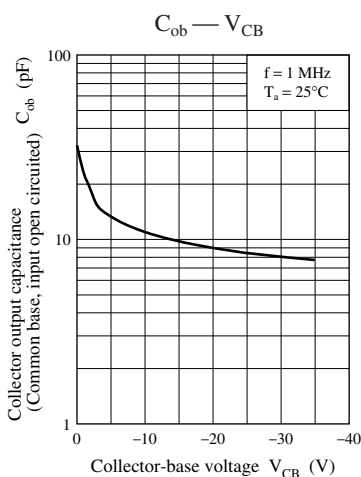
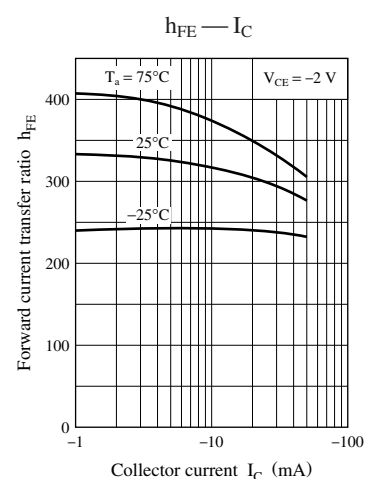
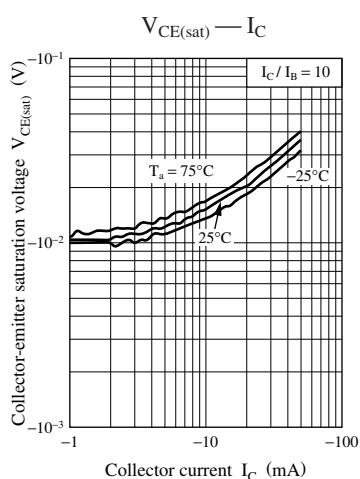
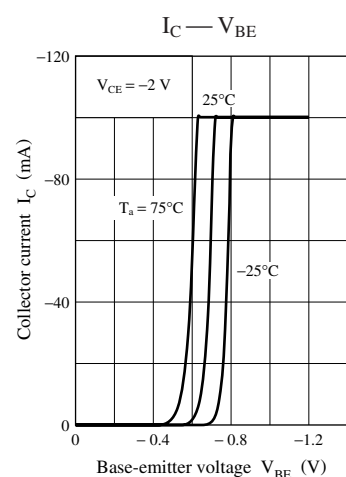
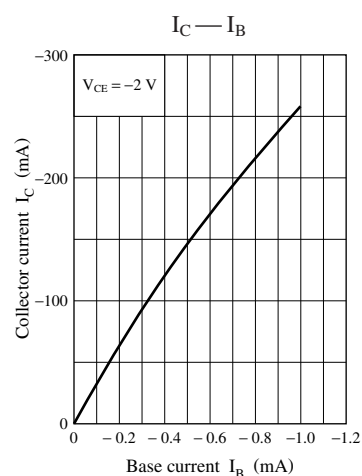
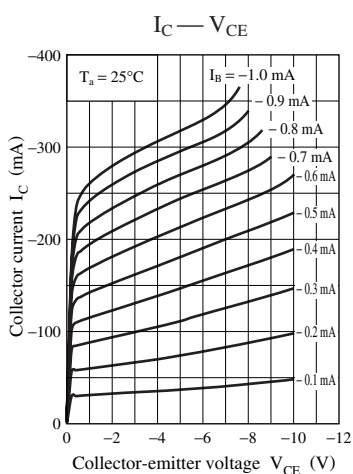
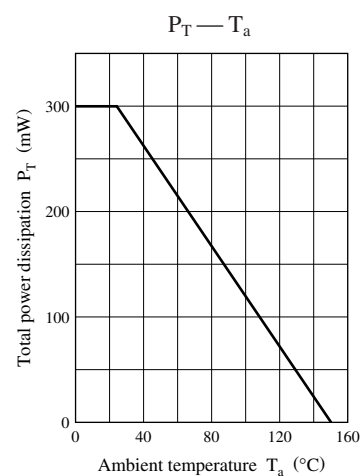
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = -10 \mu\text{A}$, $I_E = 0$	-40			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -2 \text{ mA}$, $I_B = 0$	-20			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = -10 \mu\text{A}$, $I_C = 0$	-15			V
Forward current transfer ratio *1	h_{FE1}	$V_{CE} = -2 \text{ V}$, $I_C = -100 \text{ mA}$	160		560	—
	h_{FE2}	$V_{CE} = -2 \text{ V}$, $I_C = -500 \text{ mA}$	100			
h_{FE} ratio *1, 2	$h_{FE(\text{Small/Large})}$	$V_{CE} = -2 \text{ V}$, $I_C = -100 \text{ mA}$	0.50	0.99		—
Collector-emitter saturation voltage *1	$V_{CE(\text{sat})}$	$I_C = -100 \text{ mA}$, $I_B = -10 \text{ mA}$		-60	-300	mV
		$I_C = -0.5 \text{ A}$, $I_B = -25 \text{ mA}$		-210	-500	
Transition frequency	f_T	$V_{CB} = -5 \text{ V}$, $I_E = 50 \text{ mA}$, $f = 200 \text{ MHz}$		170		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = -10 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$		16		pF

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

2. *1: Pulse measurement

*2: Ratio between 2 elements



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