

2SB0970 (2SB970)

Silicon PNP epitaxial planar type

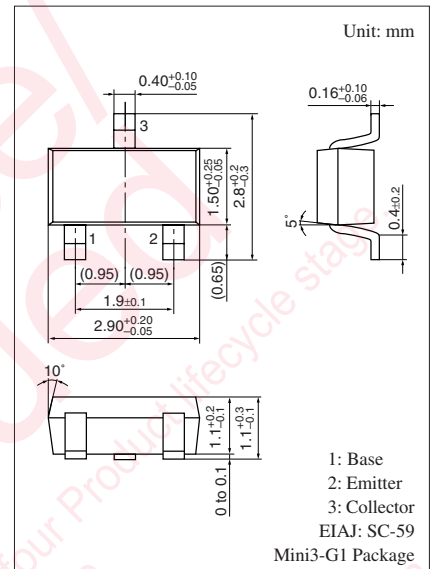
For low-voltage output amplification

■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- 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}	-15	V
Collector-emitter voltage (Base open)	V_{CEO}	-10	V
Emitter-base voltage (Collector open)	V_{EBO}	-7	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	$^\circ\text{C}$



Marking Symbol: 1R

■ 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}	$I_C = -10 \mu\text{A}$, $I_E = 0$	-15			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -1 \text{ mA}$, $I_B = 0$	-10			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = -10 \mu\text{A}$, $I_C = 0$	-7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -10 \text{ V}$, $I_E = 0$			-100	nA
Forward current transfer ratio *1	h_{FE1} *2	$V_{CE} = -2 \text{ V}$, $I_C = -0.5 \text{ A}$	130		350	—
	h_{FE2}	$V_{CE} = -2 \text{ V}$, $I_C = -1 \text{ A}$	60			—
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	$I_C = -0.4 \text{ A}$, $I_B = -8 \text{ mA}$		-0.16	-0.30	V
Base-emitter saturation voltage *1	$V_{BE(sat)}$	$I_C = -0.4 \text{ A}$, $I_B = -8 \text{ mA}$		-0.8	-1.2	V
Transition frequency	f_T	$V_{CB} = -10 \text{ V}$, $I_E = 50 \text{ mA}$, $f = 200 \text{ MHz}$		130		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = -10 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$		22		pF

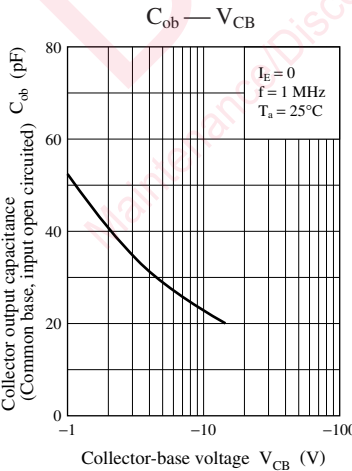
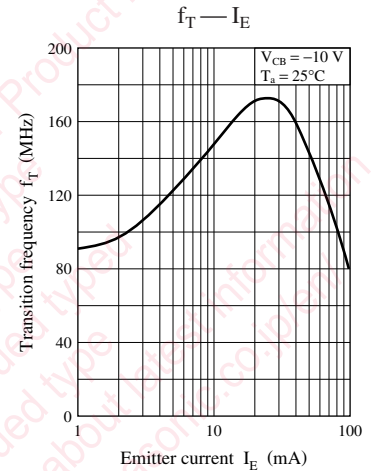
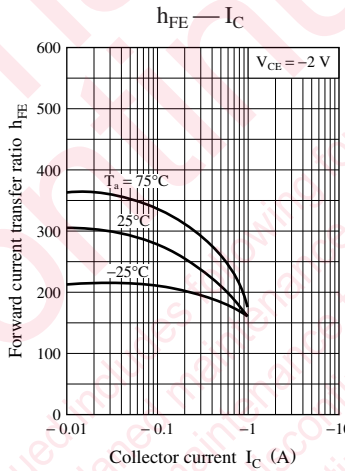
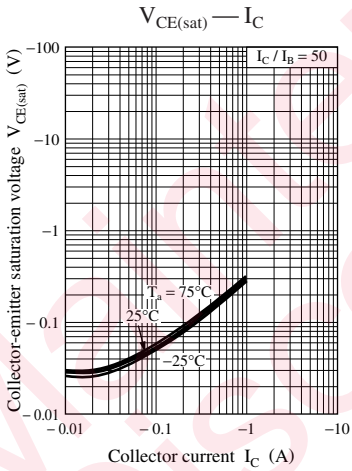
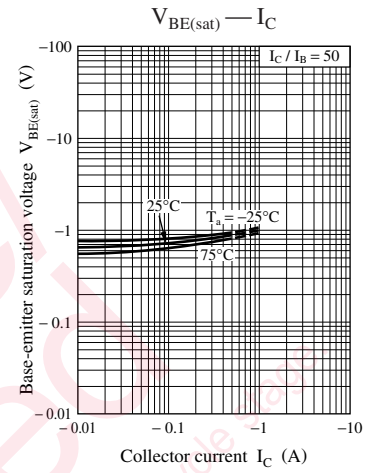
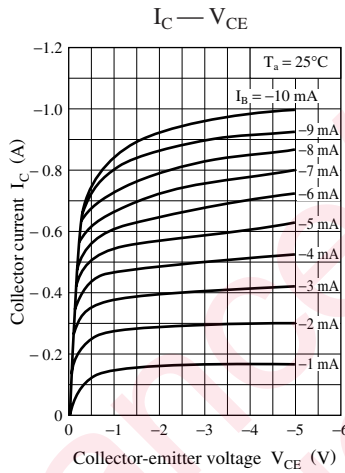
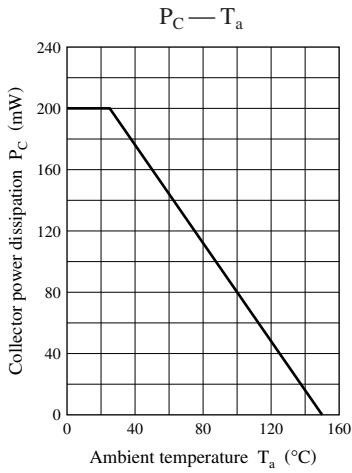
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *1: Pulse measurement

*2: Rank classification

Rank	R	S
h_{FE1}	130 to 220	180 to 350

Note) The part number in the parenthesis shows conventional part number.



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