

2SB1050

Silicon PNP epitaxial planar type

For low-frequency amplification

■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Large collector current I_C
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	-30	V
Collector-emitter voltage (Base open)	V_{CEO}	-20	V
Emitter-base voltage (Collector open)	V_{EBO}	-7	V
Collector current	I_C	-5	A
Peak collector current	I_{CP}	-8	A
Collector power dissipation *	P_C	1	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Note) *: Print circuit board: Copper foil area of 1 cm² or more, and the board thickness of 1.7 mm for the collector portion

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

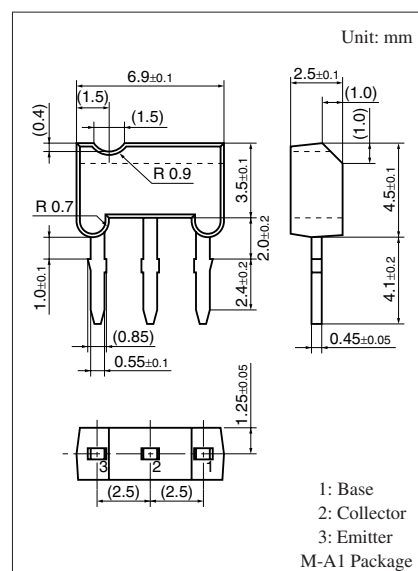
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -1 \text{ mA}$, $I_B = 0$	-20			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = -10 \mu\text{A}$, $I_C = 0$	-7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -10 \text{ V}$, $I_E = 0$			-100	nA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = -5 \text{ V}$, $I_C = 0$			-100	nA
Forward current transfer ratio *1, 2	h_{FE}	$V_{CE} = -2 \text{ V}$, $I_C = -2 \text{ A}$	90		625	—
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	$I_C = -3 \text{ A}$, $I_B = -0.1 \text{ A}$			-1	V
Transition frequency	f_T	$V_{CB} = -6 \text{ V}$, $I_E = 50 \text{ mA}$, $f = 200 \text{ MHz}$		120		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = -20 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$			85	pF

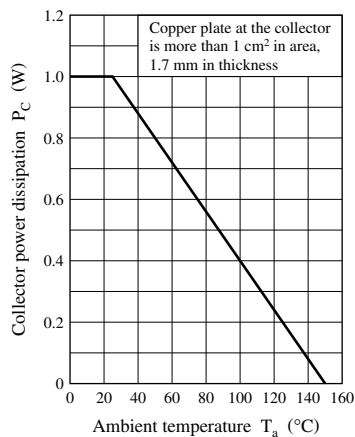
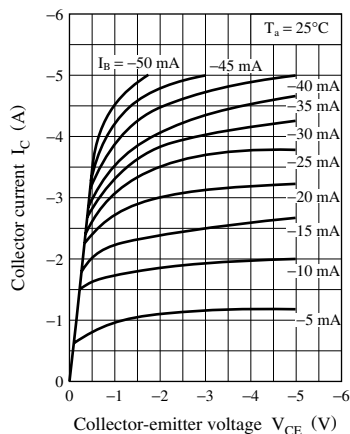
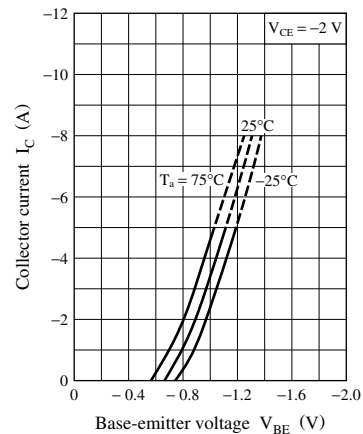
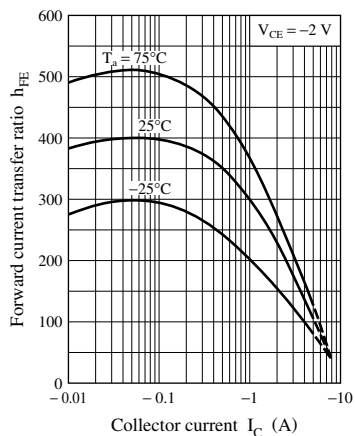
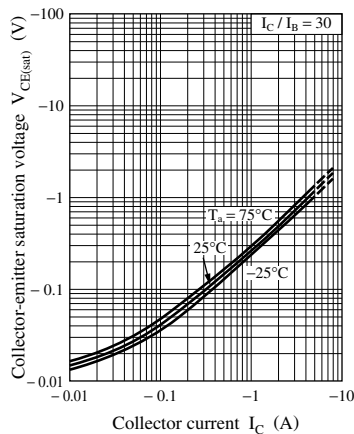
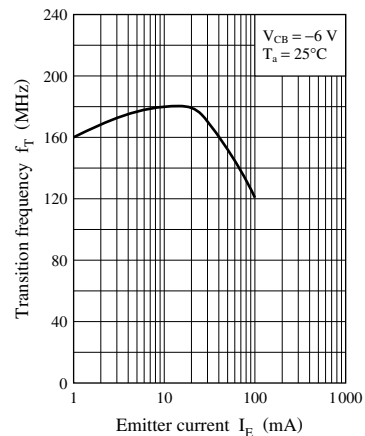
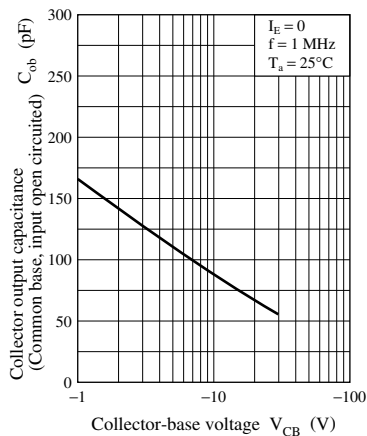
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *1: Pulse measurement

*2: Rank classification

Rank	P	Q	R
h_{FE}	90 to 135	120 to 205	180 to 625



$P_C - T_a$  $I_C - V_{CE}$  $I_C - V_{BE}$  $h_{FE} - I_C$  $V_{CE(sat)} - I_C$  $f_T - I_E$  $C_{ob} - V_{CB}$ 

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