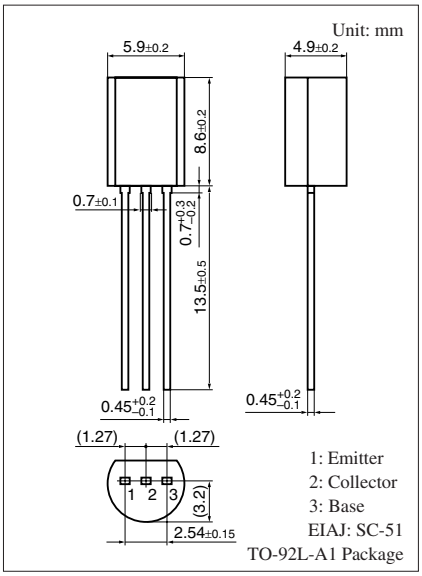
2SB0873 (2SB873)

Silicon PNP epitaxial planar type

For low-frequency power amplification
For DC-DC converter
For stroboscope



■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Large collector current I_C

■ Absolute Maximum Ratings $T_a = 25°C$

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}	−10	A
Collector power dissipation	P_C	1	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

■ Electrical Characteristics $T_a = 25°C \pm 3°C$

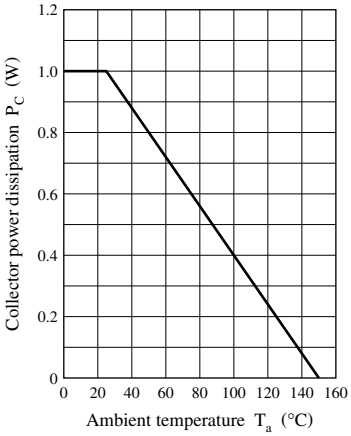
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -1$ mA, $I_B = 0$	−20			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = -10$ µA, $I_C = 0$	−7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -10$ V, $I_E = 0$			−100	nA
Emitter-base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

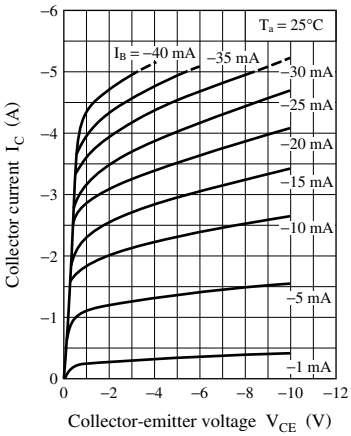
Rank	P	Q	R
h_{FE}	90 to 135	120 to 205	180 to 625

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

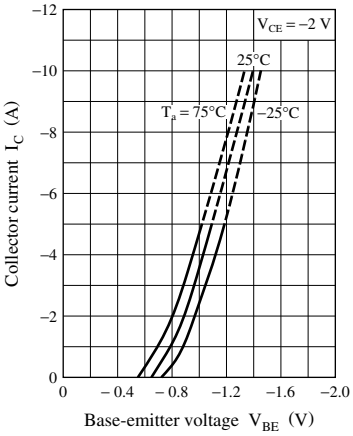
P_C — T_a



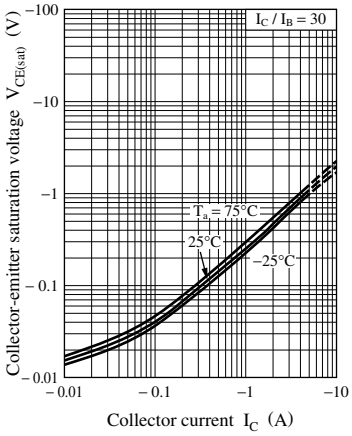
I_C — V_{CE}



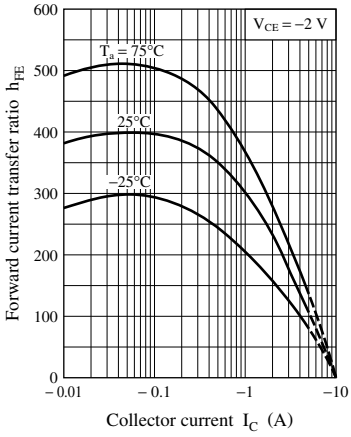
I_C — V_{BE}



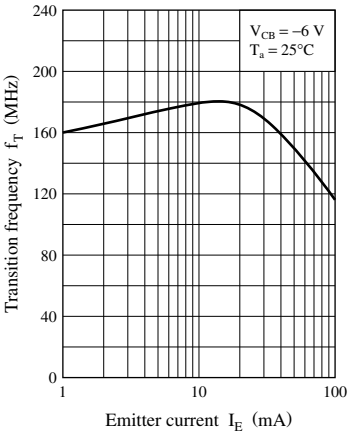
$V_{CE(sat)}$ — I_C



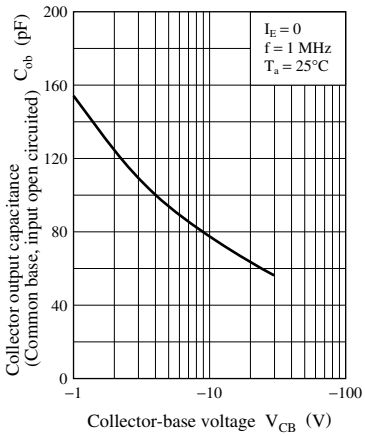
h_{FE} — I_C



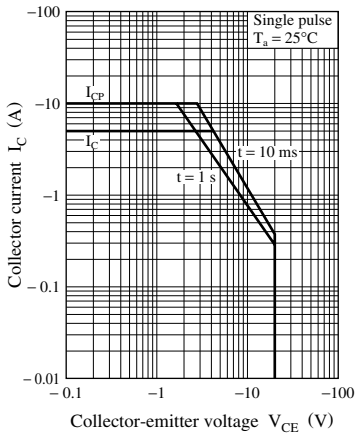
f_T — I_E



C_{ob} — V_{CB}



Safe operation area



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