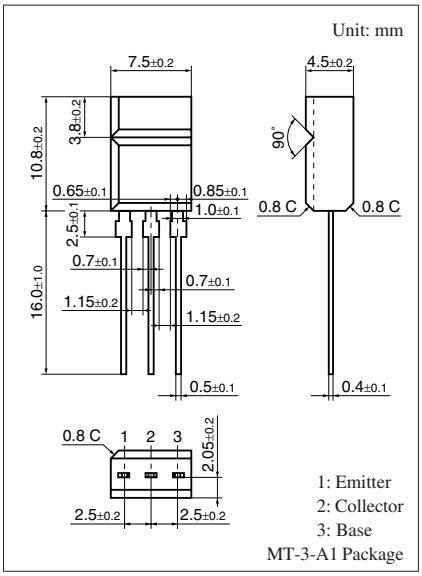
2SB1593

Silicon PNP epitaxial planar type

For low-frequency output amplification



■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Allowing automatic insertion with radial taping

■ Absolute Maximum Ratings $T_a = 25°C$

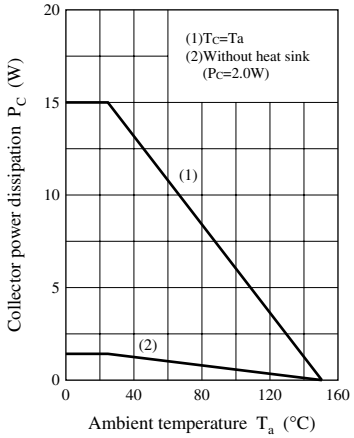
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	−29	V
Collector-emitter voltage (Resistor between B and E)	V_{CER}	−29	V
Collector-emitter voltage (Base open)	V_{CEO}	−20	V
Emitter-base voltage (Collector open)	V_{EBO}	−11	V
Collector current	I_C	−3	A
Peak collector current	I_{CP}	−10	A
Collector power dissipation	P_C	1.5	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 ~ +150	°C

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

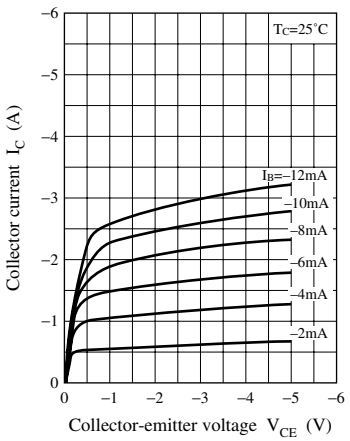
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emiter open)	V_{CBO}	$I_C = -10$ μA, $I_E = 0$	−29			V
Collector-emitter voltage (Resistor between B and E)	V_{CER}	$I_C = -1$ mA, $R_{BE} = 10$ kΩ	−29			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -1$ mA, $I_B = 0$	−20			V
Emiter-base voltage (Collector open)	V_{EBO}	$I_E = -10$ μA, $I_C = 0$	−11			V
Forward current transfer ratio	h_{FE}	$V_{CE} = -2$ V, $I_C = -2.6$ A	100		450	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2.6$ A, $I_B = -40$ mA		− 0.3	− 0.5	V
Transition frequency	f_T	$V_{CB} = -10$ V, $I_E = 50$ mA, f = 200 MHz		200		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = -10$ V, $I_E = 0$, f = 1 MHz		110	150	pF

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

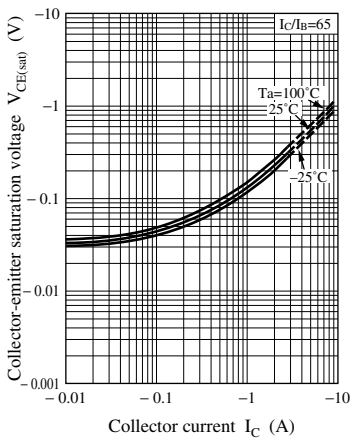
P_C — T_a



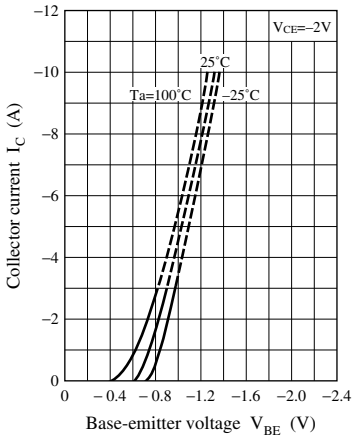
I_C — V_{CE}



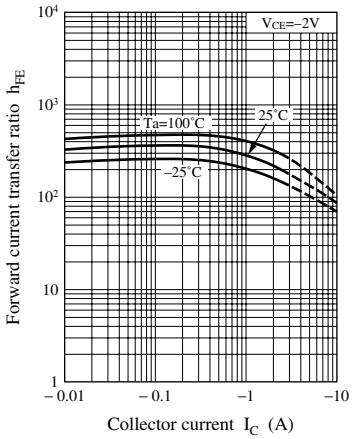
$V_{CE(sat)}$ — I_C



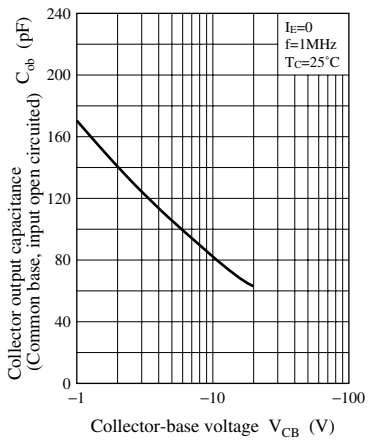
I_C — V_{BE}



h_{FE} — I_C



C_{ob} — V_{CB}



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