

2SC1846

Silicon NPN epitaxial planar type

For medium output power amplification

Complementary to 2SA0885 (2SA885)

■ Features

- Low collector to emitter saturation voltage $V_{CE(sat)}$
- Output of 3 W can be obtained by a complementary pair with 2SA0885
- TO-126B package which requires no insulation plate for installation to the heat sink

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

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	45	V
Collector to emitter voltage	V_{CEO}	35	V
Emitter to base voltage	V_{EBO}	5	V
Peak collector current	I_{CP}	1.5	A
Collector current	I_C	1	A
Collector power dissipation	P_C	1.2 * ¹	W
		5 * ²	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Note) *1: Without heat sink

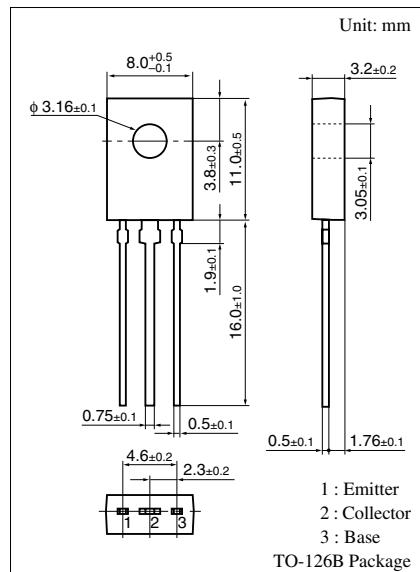
*2: With a $100 \times 100 \times 2$ mm A1 heat sink

■ Electrical Characteristics $T_C = 25^\circ\text{C}$

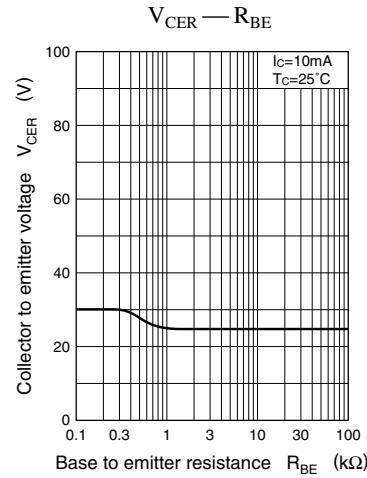
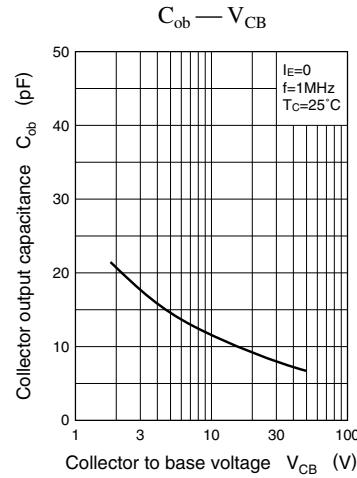
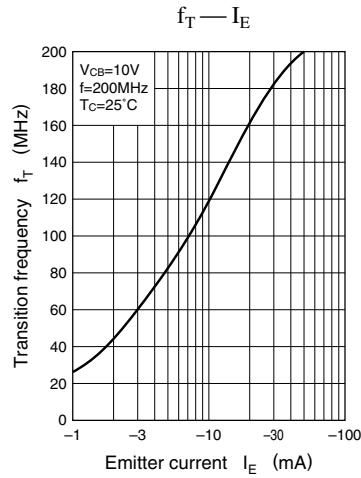
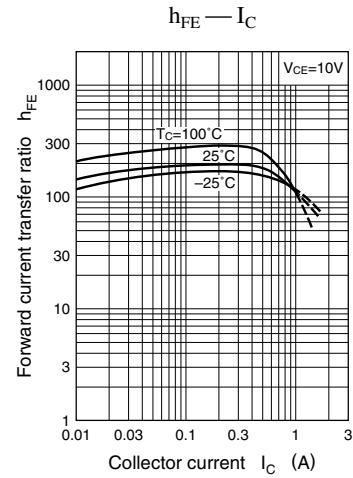
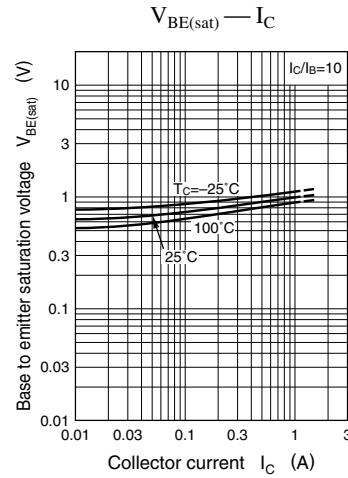
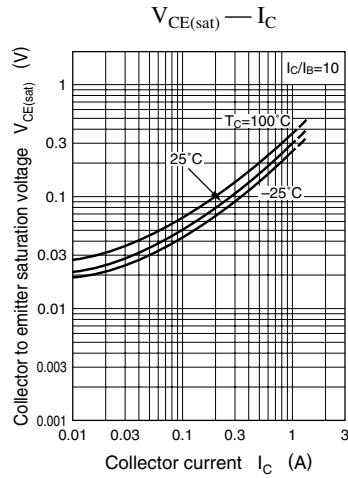
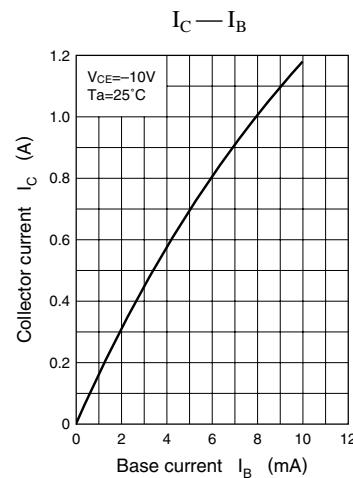
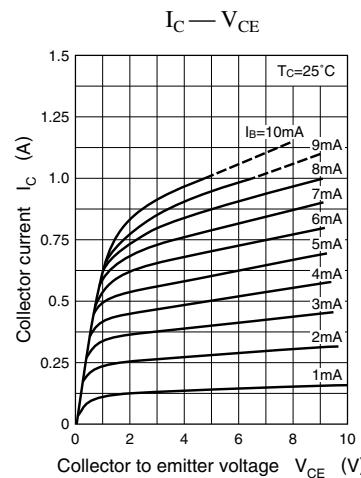
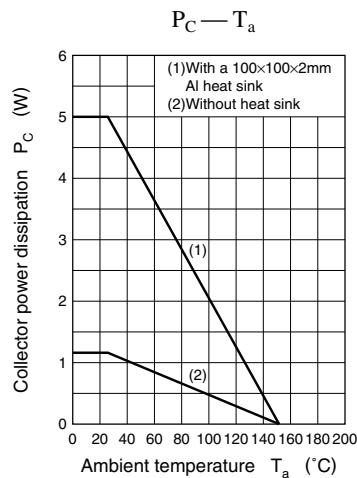
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 20$ V, $I_E = 0$			0.1	μA
	I_{CEO}	$V_{CE} = 20$ V, $I_B = 0$			100	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 5$ V, $I_C = 0$			10	μA
Collector to base voltage	V_{CBO}	$I_C = 1$ mA, $I_E = 0$	45			V
Collector to emitter voltage	V_{CEO}	$I_C = 2$ mA, $I_B = 0$	35			V
Forward current transfer ratio	h_{FE1} *	$V_{CE} = 10$ V, $I_C = 500$ mA	85	160	340	
	h_{FE2}	$V_{CE} = 5$ V, $I_C = 1$ A	50			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500$ mA, $I_B = 50$ mA			0.5	V
Transition frequency	f_T	$V_{CB} = 10$ V, $I_E = -50$ mA, $f = 200$ MHz	200			MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10$ V, $I_E = 0$, $f = 1$ MHz			20	pF

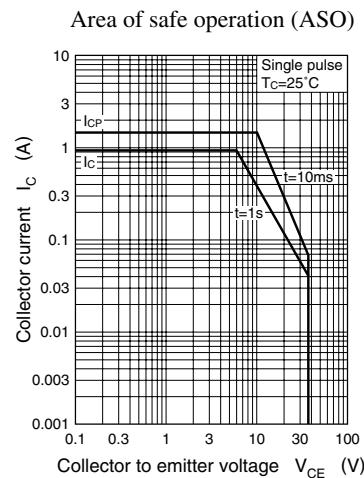
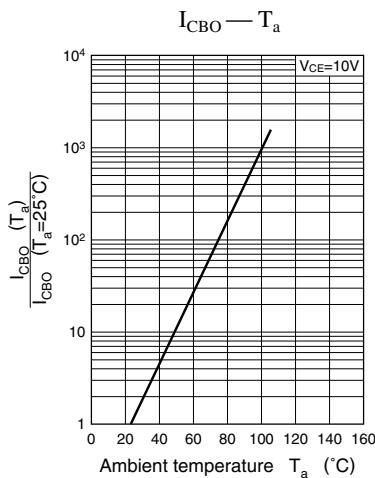
Note) *: Rank classification

Rank	Q	R	S
h_{FE1}	85 to 170	120 to 240	170 to 340



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





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