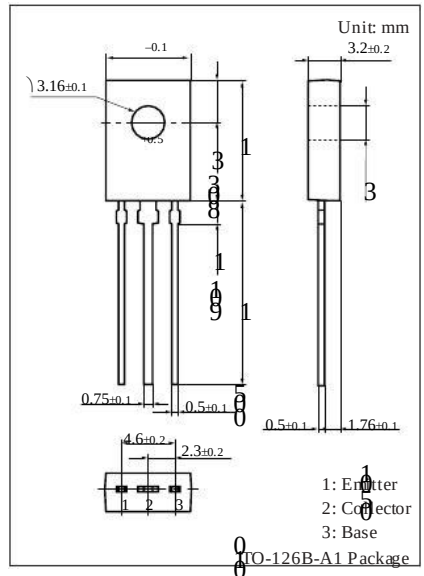
SHENZHEN QUANGUANG SEMICONDUCTOR CO.,LTD

2SC1846

Silicon NPN epitaxial planar type

For medium output power amplification
Complementary to 2SA0885



■ Features

- Low collector-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 $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	45	V
Collector-emitter voltage (Base open)	V_{CEO}	35	V
Emitter-base voltage (Collector open)	V_{EBO}	5	V
Collector current	I_C	1	A
Peak collector current	I_{CP}	1.5	A
Collector power dissipation	P_C	1.2 5.0 *	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

Note) *: With a 100 · 100 · 2 mm Al heat sink

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

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

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. *: Rank classification

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

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