

2SC1846

Silicon NPN Epitaxial Planar Type

Medium Power Amplifier
Complementary Pair with 2SA885

■ Features

- Low collector-emitter saturation voltage ($V_{CE(sat)}$)
- 3W output in complementary pair with 2SA885
- TO-126 package, no insulator needed when fixing to a heat sink

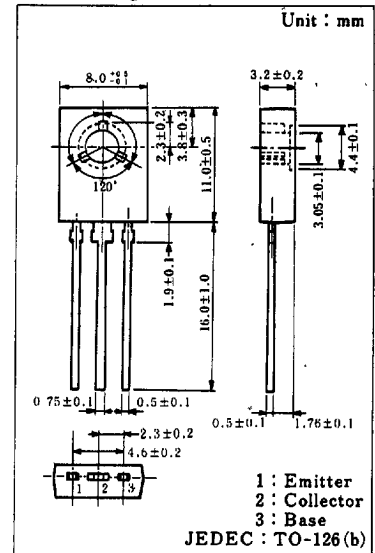
■ Absolute Maximum Ratings ($T_a=25^{\circ}\text{C}$)

Item	Symbol	Value	Unit
Collector-base voltage	V_{CB0}	45	V
Collector-emitter voltage	V_{CEO}	35	V
Emitter-base voltage	V_{EB0}	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}	$-55 \sim +150$	$^{\circ}\text{C}$

*1 Without heat sink

*2 With a $100 \times 100 \times 2\text{mm}$ Al heat sink

■ Package Dimensions



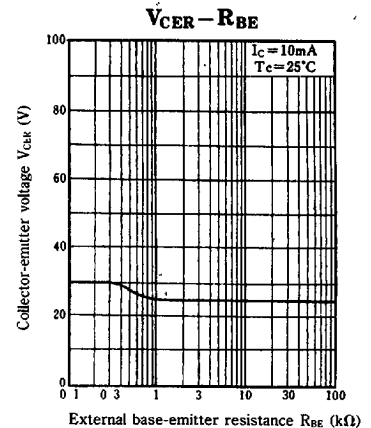
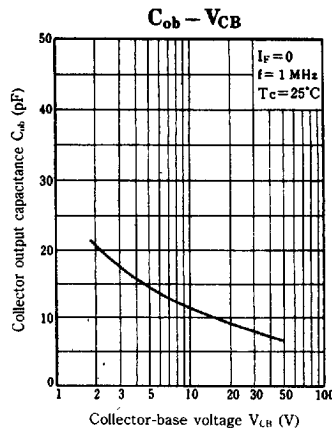
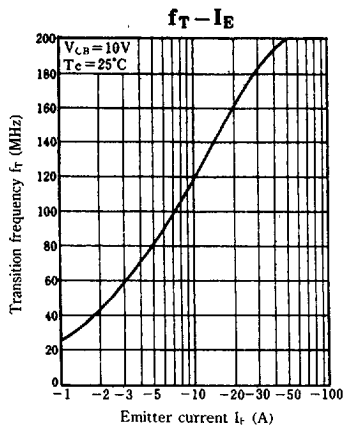
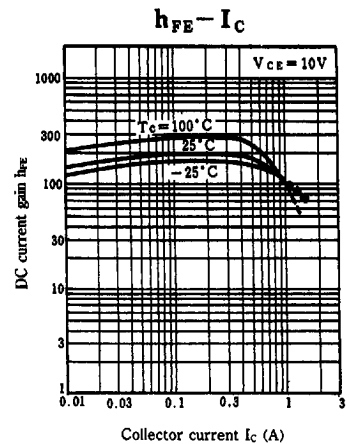
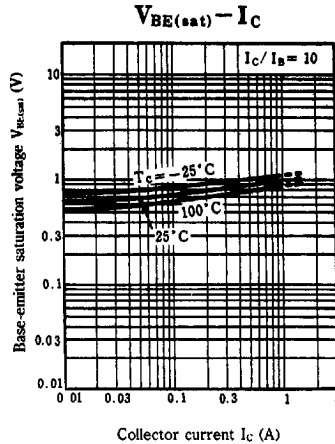
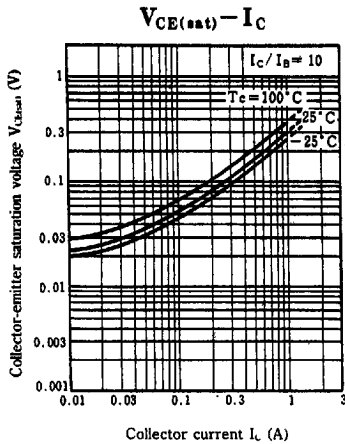
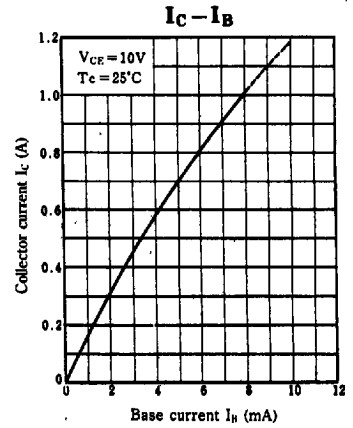
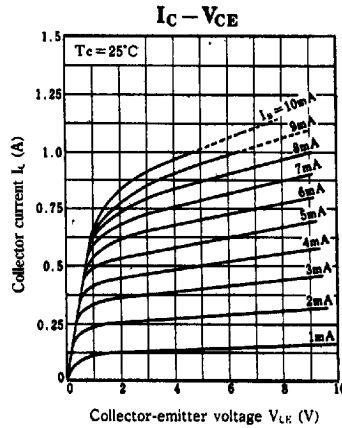
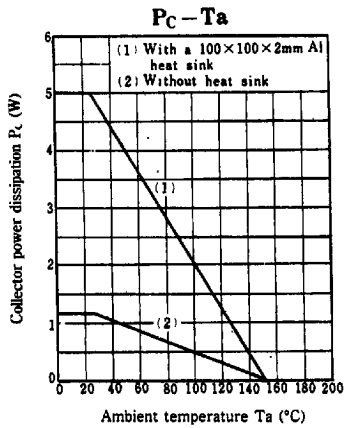
■ Electrical Characteristics ($T_c=25^{\circ}\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector-emitter voltage	I_{CB0}	$V_{CB}=20\text{ V}, I_E=0$			0.1	μA
	I_{CEO}	$V_{CE}=20\text{ V}, I_B=0$			100	μA
Emitter-base voltage	I_{EB0}	$V_{EB}=5\text{ V}, I_C=0$			10	μA
Collector-base voltage	V_{CB0}	$I_C=1\text{ mA}, I_E=0$	45			V
Collector-emitter voltage	V_{CEO}	$I_C=2\text{ mA}, I_B=0$	35			V
DC current gain	h_{FE1}^{*1}	$V_{CE}=10\text{ V}, I_C=500\text{ mA}^{*2}$	85	160	340	
	h_{FE2}	$V_{CE}=5\text{ V}, I_C=1\text{ A}^{*2}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{ mA}, I_B=50\text{ mA}$			0.5	V
Transition frequency	f_T	$V_{CB}=10\text{ V}, I_E=-50\text{ mA}, f=200\text{ MHz}$		200		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{ V}, I_E=0, f=1\text{ MHz}$			20	pF

*2 Pulse measurement

* h_{FE1} Classifications

Class	Q	R	S
h_{FE1}	85~170	120~240	170~340



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