

Description

- General small signal amplifier

Features

- Low collector saturation voltage : $V_{CE(sat)} = -0.3V$ (Max.)
- Low output capacitance : $C_{ob} = 4pF$ (Typ.)
- Complementary pair with 2SC5343E

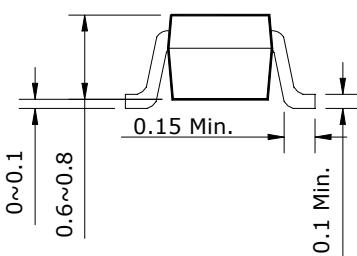
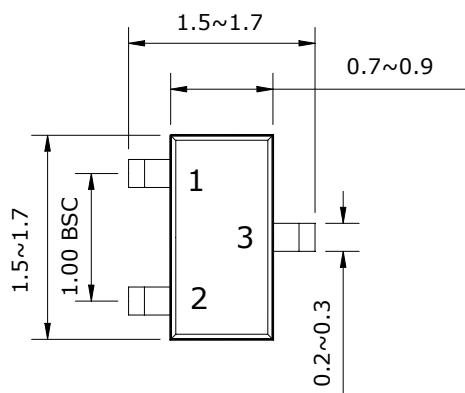
Ordering Information

Type NO.	Marking	Package Code
2SA1980E	A <input type="checkbox"/>	SOT-523

: h_{FE} rank

Outline Dimensions

unit : mm



PIN Connections

1. Base
2. Emitter
3. Collector

Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V _{CBO}	-50	V
Collector-Emitter voltage	V _{CEO}	-50	V
Emitter-Base voltage	V _{EBO}	-5	V
Collector current	I _C	-150	mA
Collector dissipation	P _C	150	mW
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55~150	°C

Electrical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV _{CBO}	I _C =-100μA, I _E =0	-50	-	-	V
Collector-Emitter breakdown voltage	BV _{CEO}	I _C =-1mA, I _B =0	-50	-	-	V
Emitter-Base breakdown voltage	BV _{EBO}	I _E =-10μA, I _C =0	-5	-	-	V
Collector cut-off current	I _{CBO}	V _{CB} =-50V, I _E =0	-	-	-0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =-5V, I _C =0	-	-	-0.1	μA
DC current gain	h _{FE} *	V _{CE} =-6V, I _C =-2mA	70	-	700	-
Collector-Emitter saturation voltage	V _{CE(sat)}	I _C =-100mA, I _B =-10mA	-	-	-0.3	V
Transition frequency	f _T	V _{CE} =-10V, I _C =-1mA	80	-	-	MHz
Collector output capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz	-	4	7	pF
Noise figure	NF	V _{CE} =-6V, I _C =-0.1mA f=1KHz, R _g =10KΩ	-	-	10	dB

*: h_{FE} rank / O : 70~140, Y : 120~240, G : 200~400, L : 300~700.

Electrical Characteristic Curves

Fig. 1 P_C - T_a

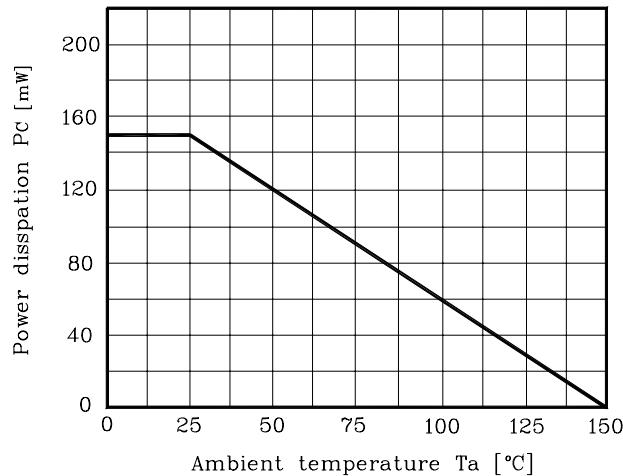


Fig. 2 I_C - V_{BE}

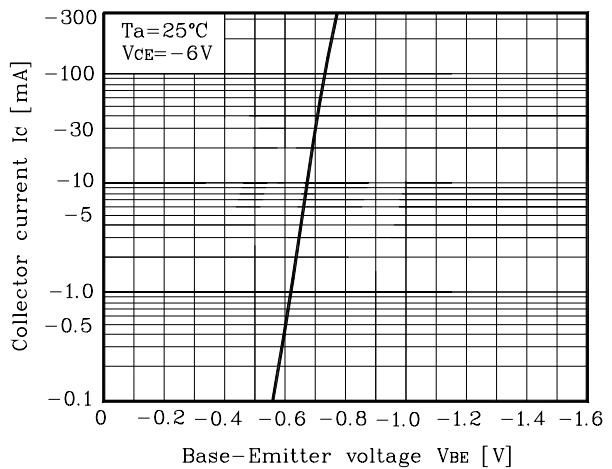


Fig. 3 I_C - V_{CE}

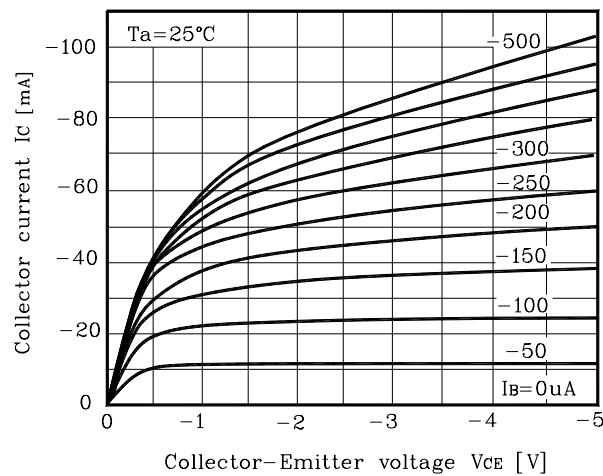


Fig. 4 h_{FE} - I_C

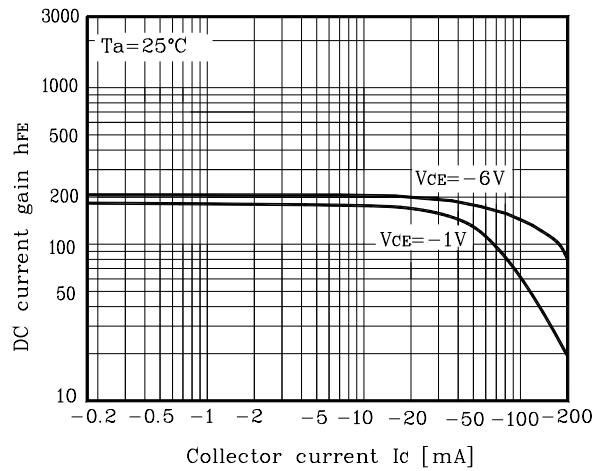
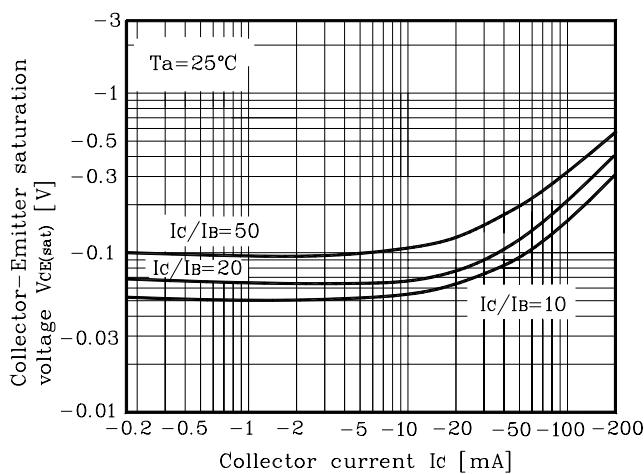


Fig. 5 $V_{CE(sat)}$ - I_C



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