

Description

- General small signal amplifier

Features

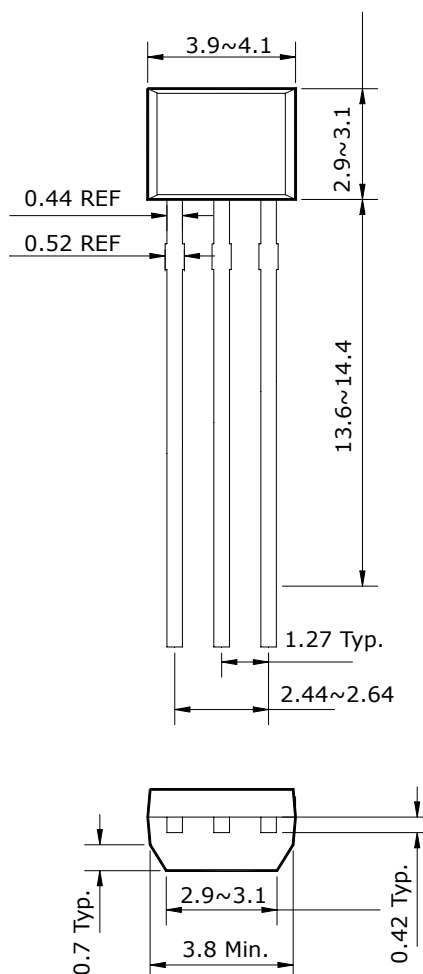
- Low collector saturation voltage : $V_{CE(sat)} = -0.3V$ (Max.)
- Low output capacitance : $C_{ob} = 4pF$ (Typ.)
- Complementary pair with 2SC5343M

Ordering Information

Type NO.	Marking	Package Code
2SA1980M	1980	TO-92M

Outline Dimensions

unit : mm



PIN Connections

1. Emitter
2. Collector
3. Base

Absolute maximum ratings $T_a=25^{\circ}\text{C}$

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}	400	mW
Junction temperature	T_{j}	150	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-55~150	$^{\circ}\text{C}$

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

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	$I_{\text{C}}=-100\mu\text{A}$, $I_{\text{E}}=0$	-50	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	$I_{\text{C}}=-1\text{mA}$, $I_{\text{B}}=0$	-50	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	$I_{\text{E}}=-10\mu\text{A}$, $I_{\text{C}}=0$	-5	-	-	V
Collector cut-off current	I_{CBO}	$V_{\text{CB}}=-50\text{V}$, $I_{\text{E}}=0$	-	-	-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{\text{EB}}=-5\text{V}$, $I_{\text{C}}=0$	-	-	-0.1	μA
DC current gain	h_{FE}^*	$V_{\text{CE}}=-6\text{V}$, $I_{\text{C}}=-2\text{mA}$	70	-	700	-
Collector-Emitter saturation voltage	$V_{\text{CE(sat)}}$	$I_{\text{C}}=-100\text{mA}$, $I_{\text{B}}=-10\text{mA}$	-	-	-0.3	V
Transition frequency	f_{T}	$V_{\text{CE}}=-10\text{V}$, $I_{\text{C}}=-1\text{mA}$	80	-	-	MHz
Collector output capacitance	C_{ob}	$V_{\text{CB}}=-10\text{V}$, $I_{\text{E}}=0$, $f=1\text{MHz}$	-	4	7	pF
Noise figure	NF	$V_{\text{CE}}=-6\text{V}$, $I_{\text{C}}=-0.1\text{mA}$ $f=1\text{KHz}$, $R_{\text{g}}=10\text{K}\Omega$	-	-	10	dB

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

[查询"2SA1980M"供应商](#)

Electrical Characteristic Curves

Fig. 1 P_C - T_a

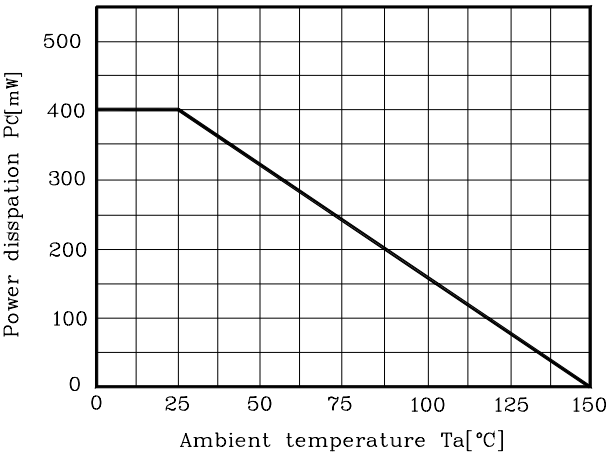


Fig. 2 I_C - V_{BE}

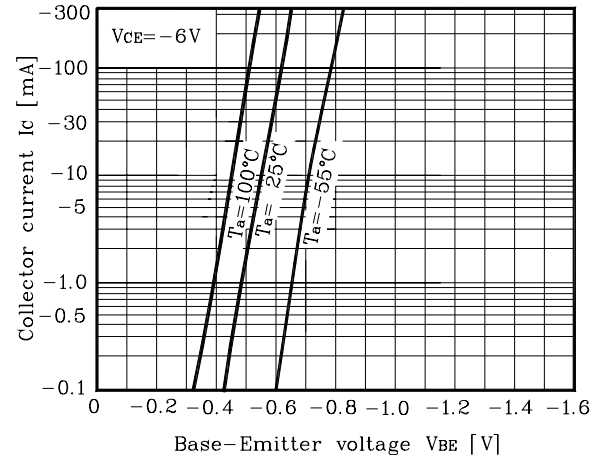


Fig. 3 I_C - V_{CE}

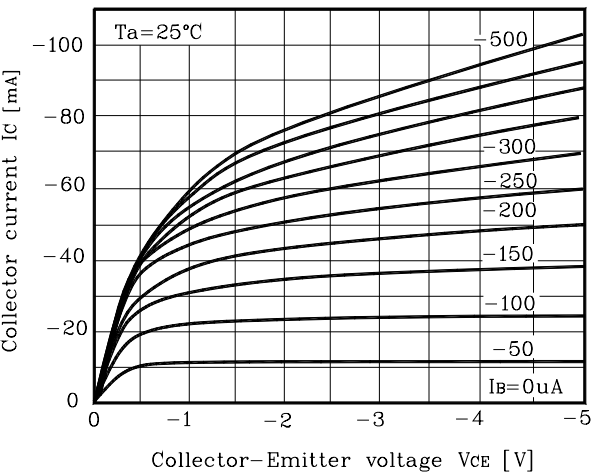


Fig. 4 h_{FE} - I_C

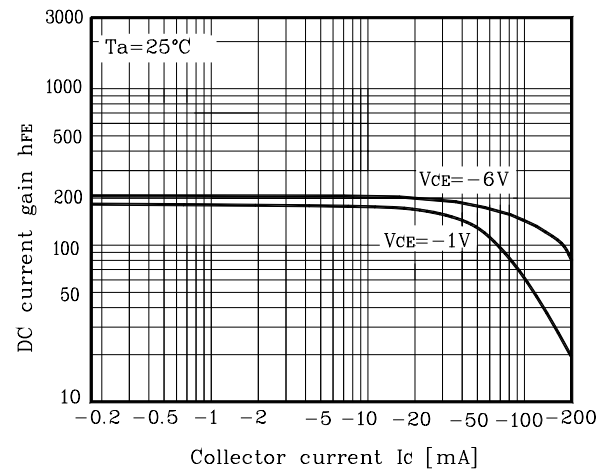
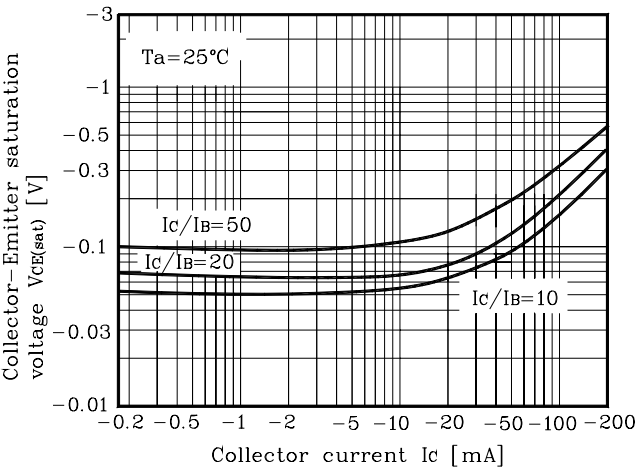


Fig. 5 $V_{CE(sat)}$ - I_C



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