

**Description**

- Audio power amplifier application

**Features**

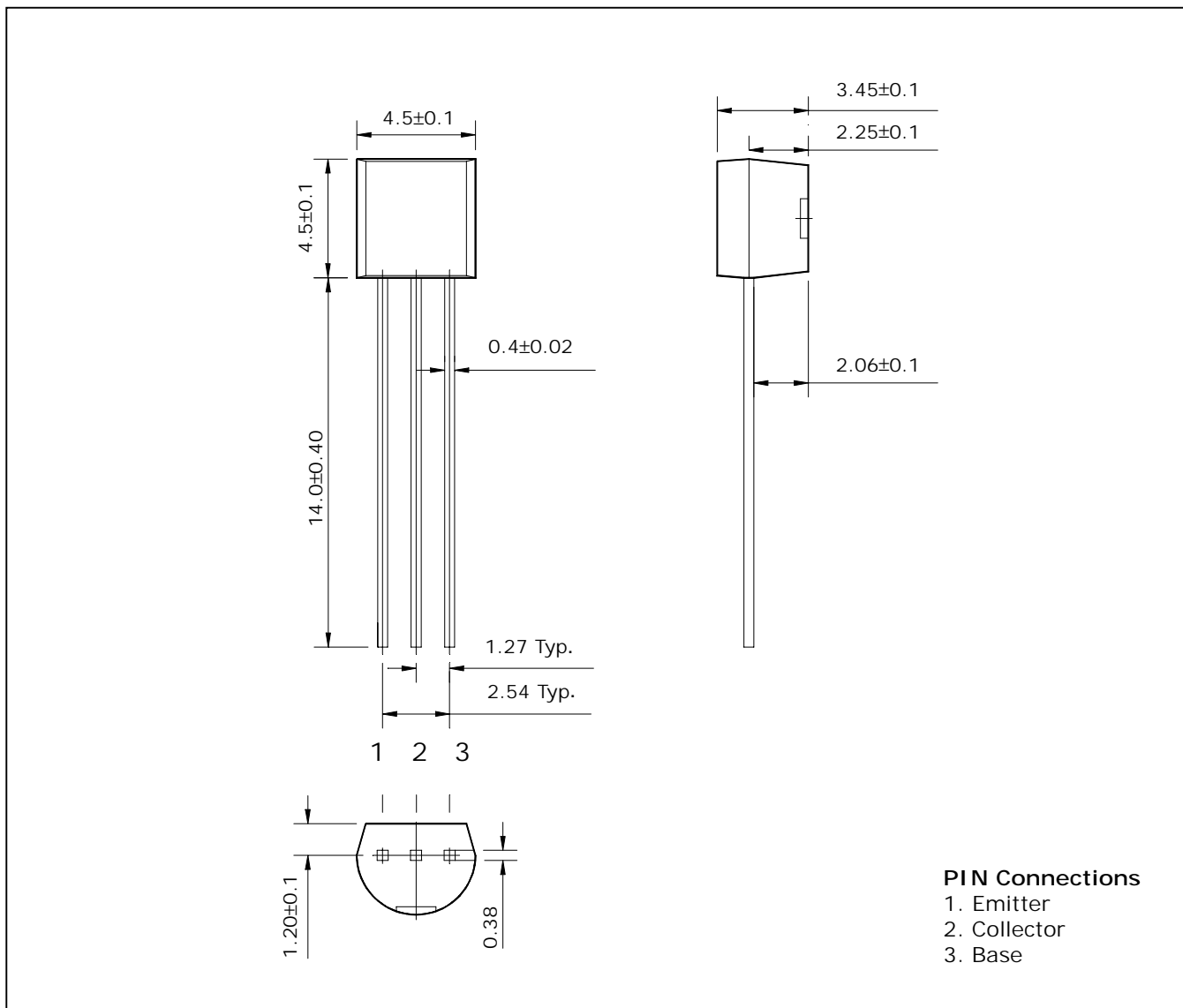
- High  $h_{FE}$  :  $h_{FE}=100\sim320$
- Complementary pair with 2SC5344

**Ordering Information**

Type NO.	Marking	Package Code
2SA1981	A1981	TO-92

**Outline Dimensions**

unit : mm



**Absolute maximum ratings**

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	$V_{CBO}$	-35	V
Collector-Emitter voltage	$V_{CEO}$	-30	V
Emitter-Base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-800	mA
Collector dissipation	$P_C$	625	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	$BV_{CBO}$	$I_C = -500\mu A, I_E = 0$	-35	-	-	V
Collector-Emitter breakdown voltage	$BV_{CEO}$	$I_C = -1mA, I_B = 0$	-30	-	-	V
Emitter-Base breakdown voltage	$BV_{EBO}$	$I_E = -50\mu A, I_C = 0$	-5	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -35V, I_E = 0$	-	-	-0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$	-	-	-0.1	$\mu A$
DC current gain	$h_{FE}^*$	$V_{CE} = -1V, I_C = -100mA$	100	-	320	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500mA, I_B = -20mA$	-	-	-0.5	V
Transition frequency	$f_T$	$V_{CE} = -5V, I_E = 10mA$	-	120	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$	-	19	-	pF

\* :  $h_{FE}$  rank / O : 100~200, Y : 160~320

Electrical Characteristic Curves

Fig. 1  $P_c$ - $T_a$

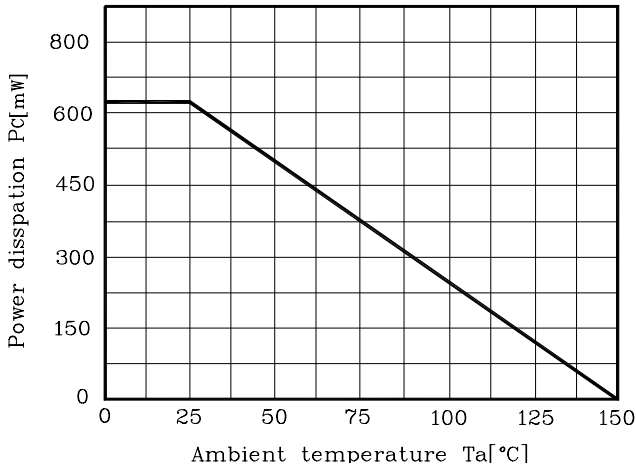


Fig. 2  $I_C$ - $V_{BE}$

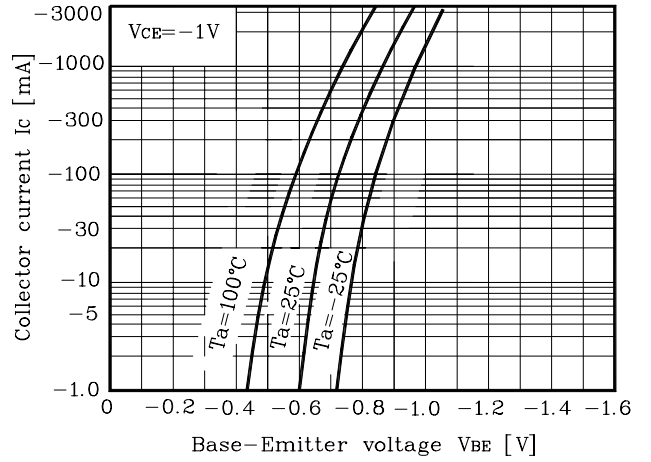


Fig. 3  $I_C$ - $V_{CE}$

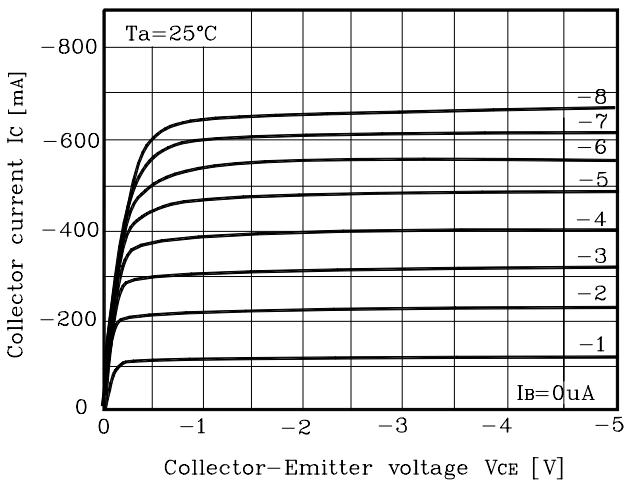


Fig. 4  $h_{FE}$ - $I_C$

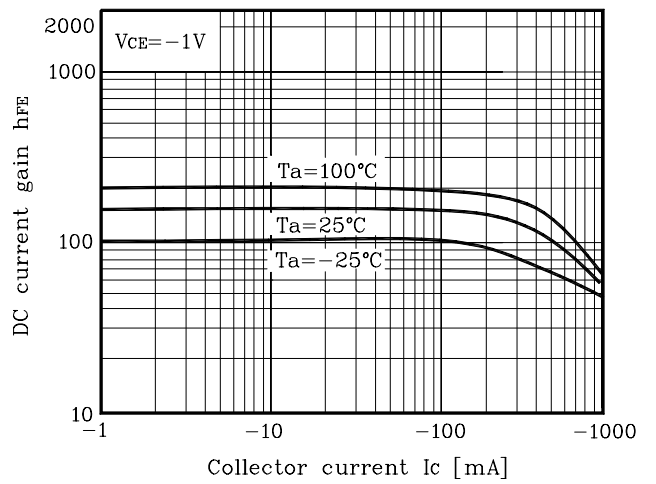


Fig. 5  $V_{CE(SAT)}$ - $I_C$

