

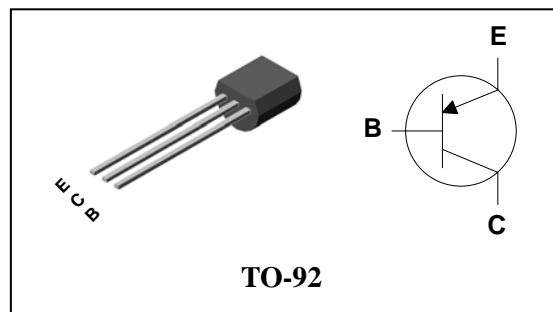
Description

- Medium power amplifier

Features

- Large collector current : $I_{CMax} = -500\text{mA}$
- Suitable for low-Voltage operation because of its low saturation voltage
- Complementary pair with 2SC5342

PIN Connection



Ordering Information

Type NO.	Marking	Package Code
2SA1979	A1979	TO-92

Absolute maximum ratings

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

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	-40	V
Collector-Emitter voltage	V_{CEO}	-32	V
Emitter-Base voltage	V_{EBO}	-5	V
Collector current	I_C	-500	mA
Collector dissipation	P_C	500	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}	$I_C = -100\mu\text{A}, I_E = 0$	-40	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	$I_C = -1\text{mA}, I_B = 0$	-32	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	$I_E = -10\mu\text{A}, I_C = 0$	-5	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB} = -40\text{V}, I_E = 0$	-	-	-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$	-	-	-0.1	μA
DC current gain	h_{FE}^*	$V_{CE} = -1\text{V}, I_C = -100\text{mA}$	70	-	240	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}, I_B = -10\text{mA}$	-	-	-0.25	V
Transistor frequency	f_T	$V_{CE} = -6\text{V}, I_C = -20\text{mA}$	-	200	-	MHz
Collector output capacitance	C_{ob}	$V_{CB} = -6\text{V}, I_E = 0, f = 1\text{MHz}$	-	7.5	-	pF

* : h_{FE} rank / O : 70~140, Y : 120~240

Electrical Characteristic Curves

Fig. 1 $P_C - T_a$

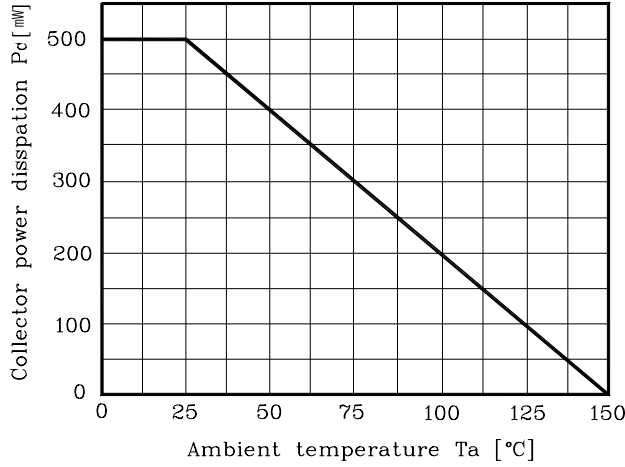


Fig. 2 $I_C - V_{BE}$

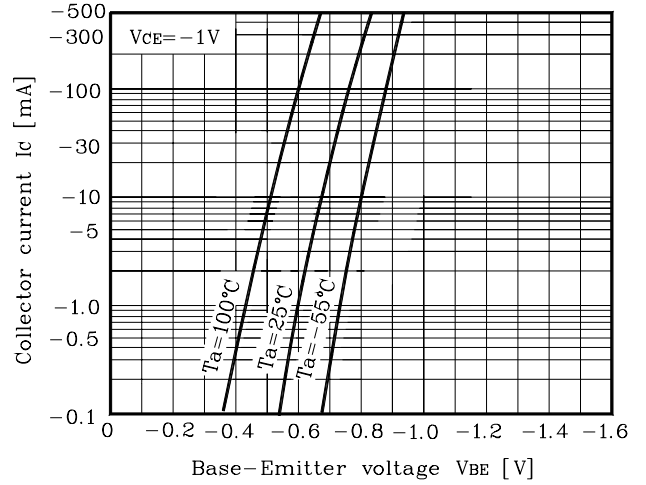


Fig. 3 $I_C - V_{CE}$

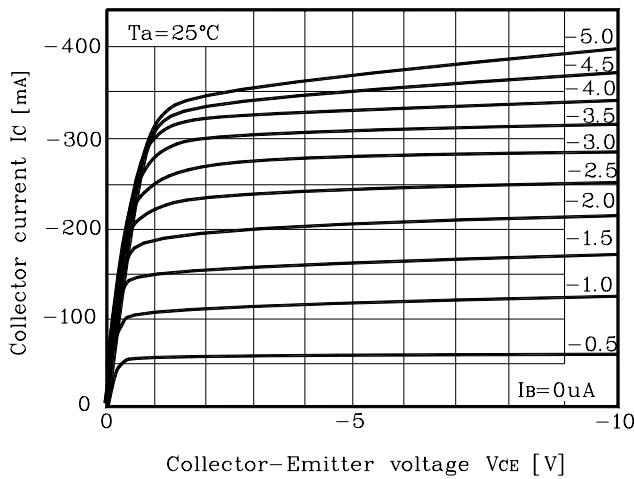


Fig. 4 $V_{CE(sat)} - I_C$

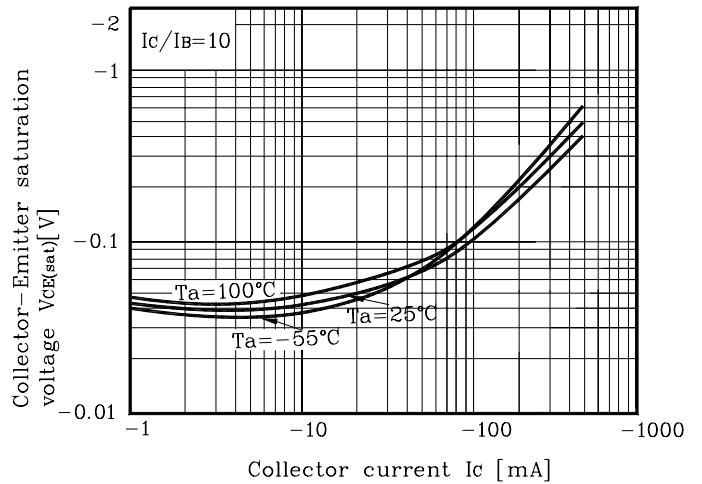


Fig. 5 $h_{FE} - I_C$

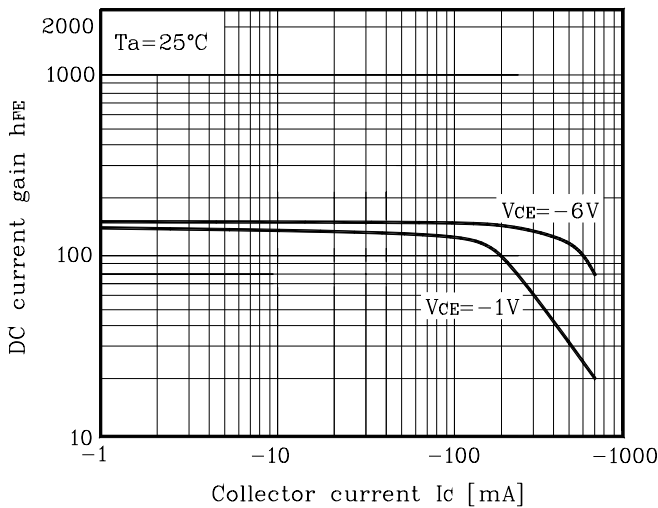
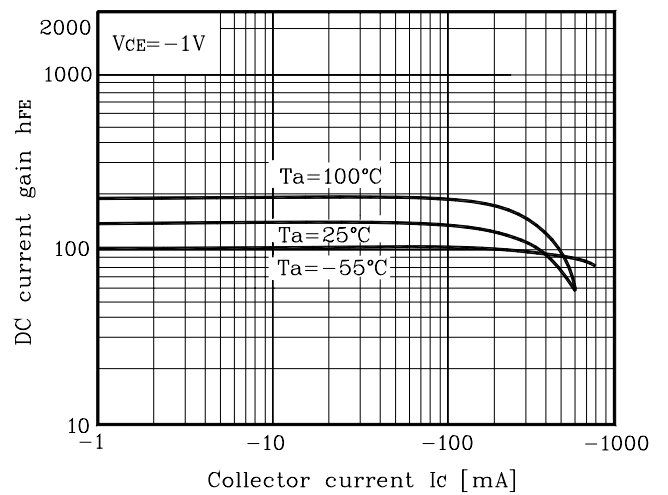
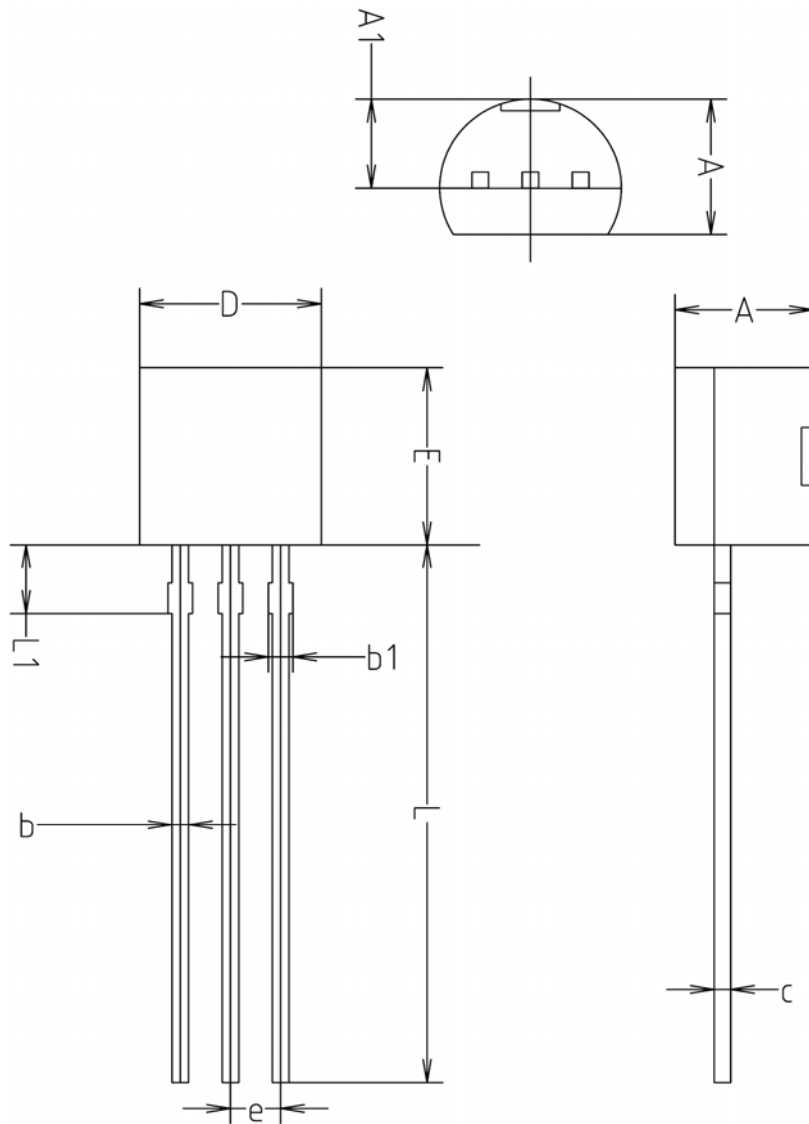


Fig. 6 $h_{FE} - I_C$



Outline Dimension



SYMBOL	MILLIMETERS(mm)		
	MINIMUM	NOMINAL	MAXIMUM
A	3.40	3.50	3.66
A1	2.46	2.51	2.59
b	0.39	0.44	0.53
b1	0.39	—	0.63
c	0.35	0.42	0.47
D	4.48	4.60	4.70
E	4.48	4.60	4.70
e	1.17	1.27	1.37
L	13.70	14.00	14.77
L1	1.55	1.70	2.15

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