

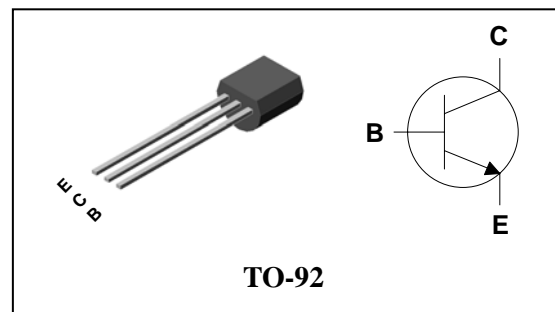
## Description

- General small signal amplifier

## Features

- Low collector saturation voltage  
:  $V_{CE(sat)} = 0.25V(\text{Max.})$
- Low output capacitance :  $C_{ob} = 2pF(\text{Typ.})$
- Complementary pair with 2SA1980

## PIN Connection



## Ordering Information

Type NO.	Marking	Package Code
2SC5343	C5343	TO-92

## Absolute maximum ratings

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

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	$V_{CBO}$	60	V
Collector-Emitter voltage	$V_{CEO}$	50	V
Emitter-Base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	150	mA
Collector dissipation	$P_C$	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	$BV_{CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	60	-	-	V
Collector-Emitter breakdown voltage	$BV_{CEO}$	$I_C = 1\text{mA}, I_B = 0$	50	-	-	V
Emitter-Base breakdown voltage	$BV_{EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	5	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB} = 60V, I_E = 0$	-	-	0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$	-	-	0.1	$\mu\text{A}$
DC current gain	$h_{FE}^*$	$V_{CE} = 6V, I_C = 2\text{mA}$	70	-	700	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100\text{mA}, I_B = 10\text{mA}$	-	-	0.25	V
Transistion frequency	$f_T$	$V_{CE} = 10V, I_C = 1\text{mA}$	80	-	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10V, I_E = 0, f = 1\text{MHz}$	-	2	3.5	pF
Noise figure	NF	$V_{CE} = 6V, I_C = 0.1\text{mA}, f = 1\text{KHz}, R_g = 10K\Omega$	-	-	10	dB

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

# Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

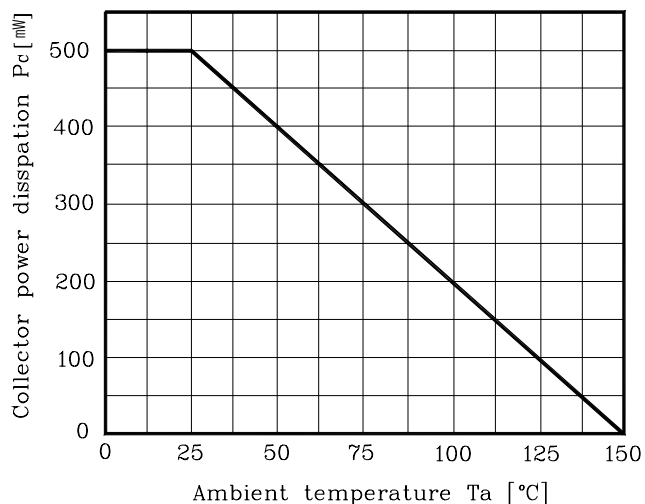


Fig. 2  $I_C - V_{BE}$

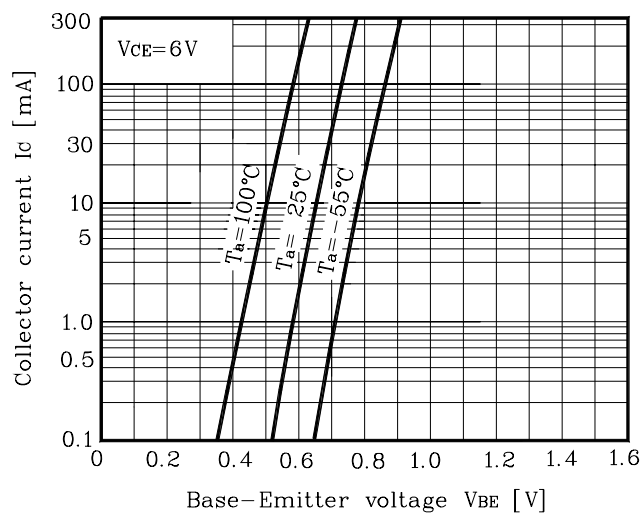


Fig. 3  $I_C - V_{CE}$

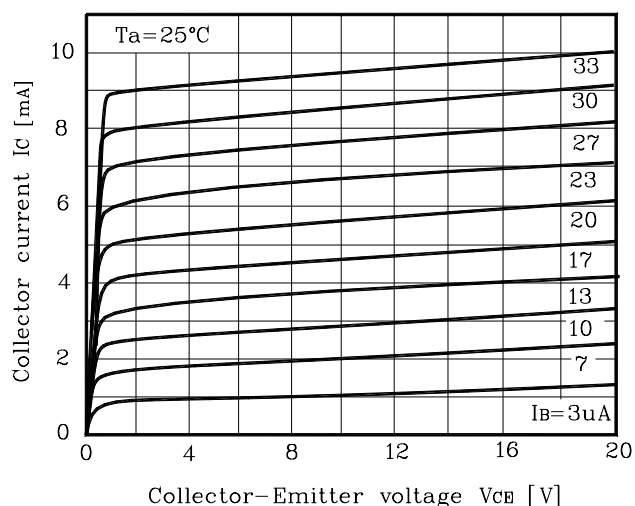


Fig. 4  $h_{FE} - I_C$

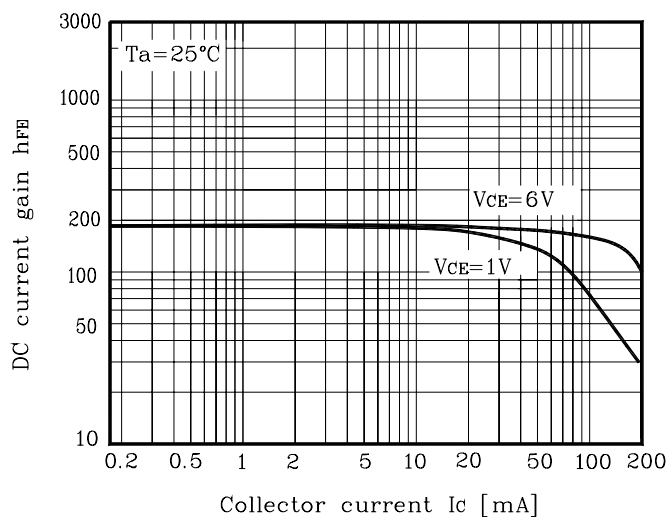
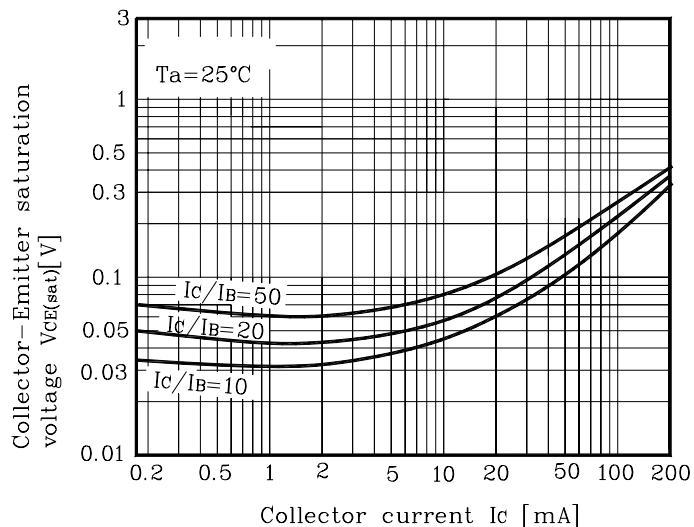
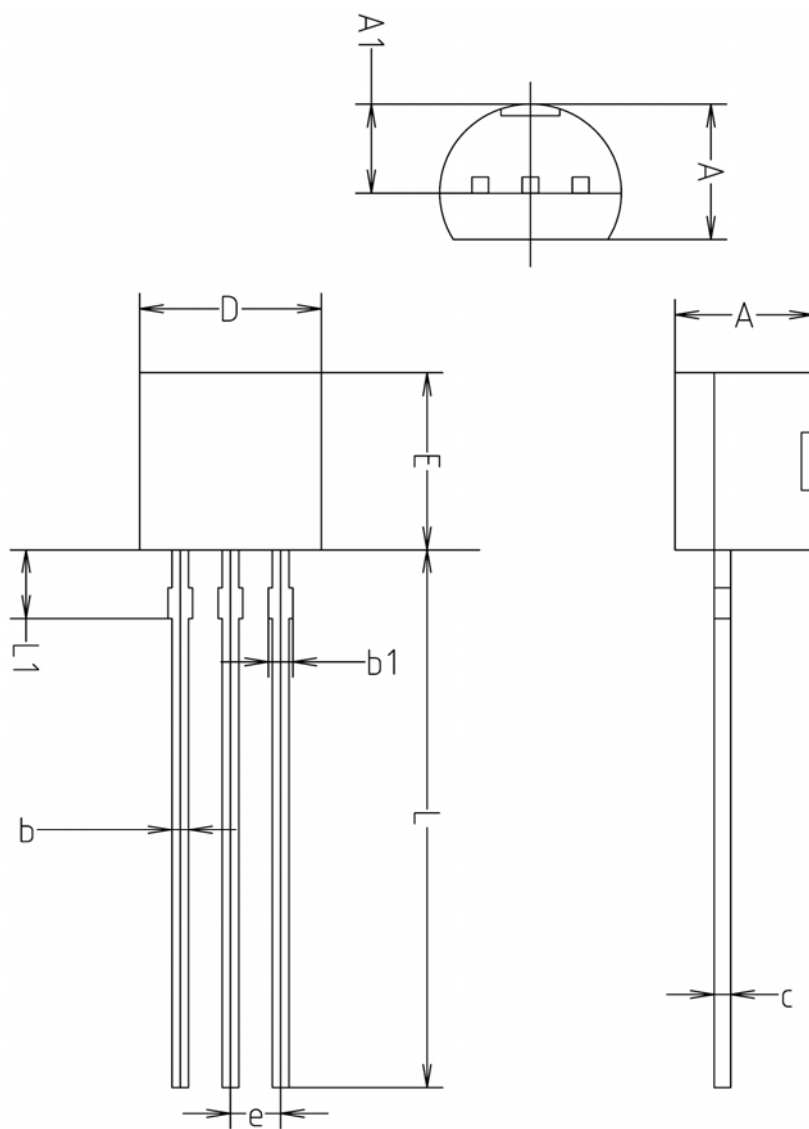


Fig. 5  $V_{CE(sat)} - I_C$



## 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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