

## Description

- General small signal amplifier

## Features

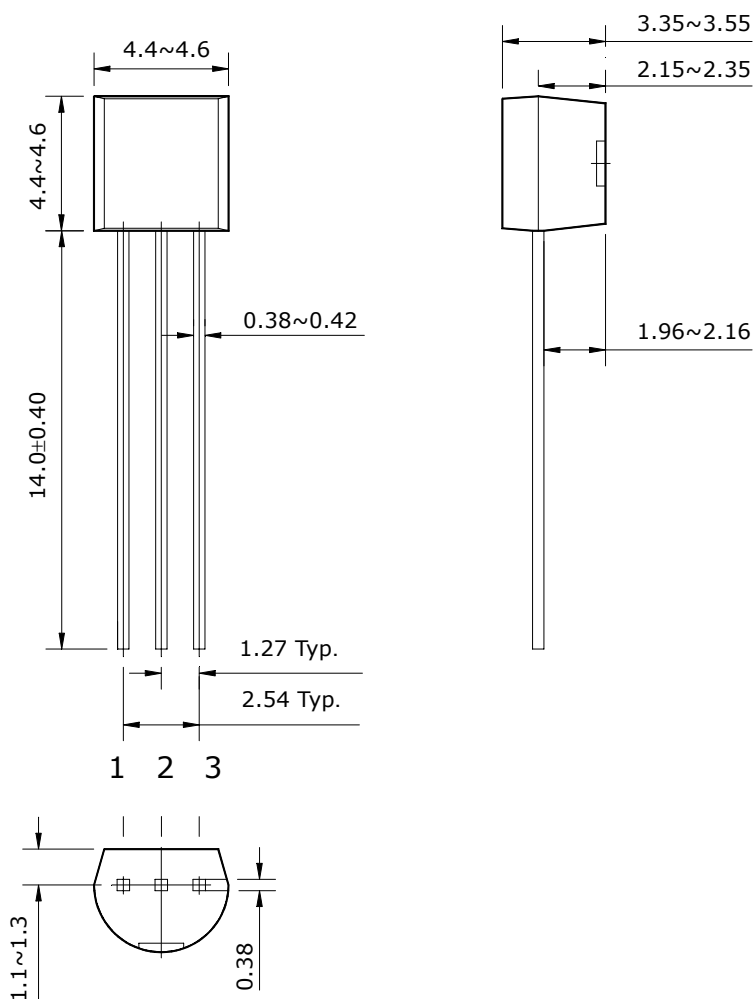
- Low collector saturation voltage :  $V_{CE(sat)}=0.25V(\text{Max.})$
- Low output capacitance :  $C_{ob}=2pF(\text{Typ.})$
- Complementary pair with 2SA1980

## Ordering Information

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

## Outline Dimensions

unit : mm



### PIN Connections

1. Emitter
2. Collector
3. Base

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

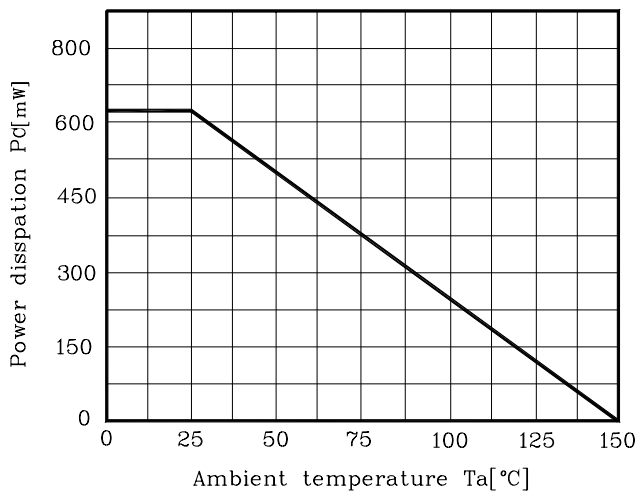
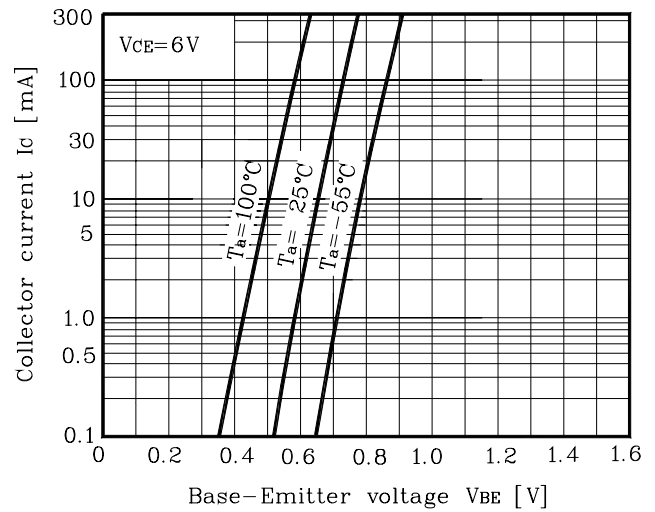
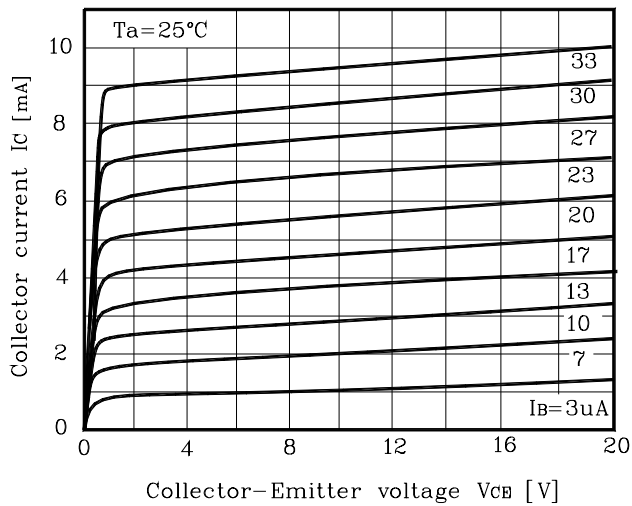
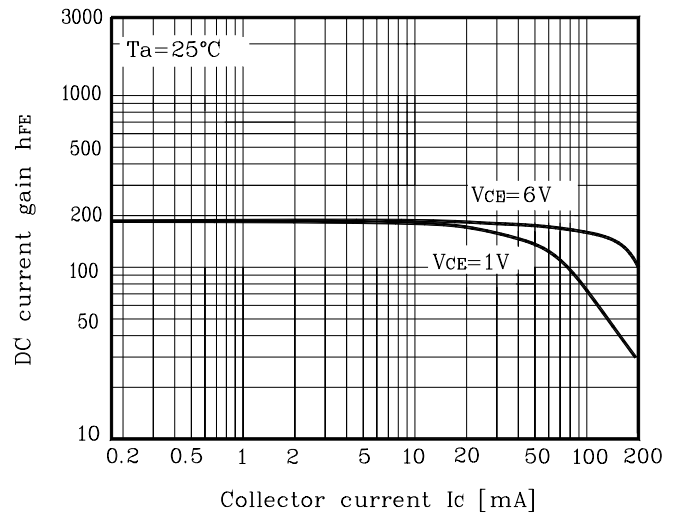
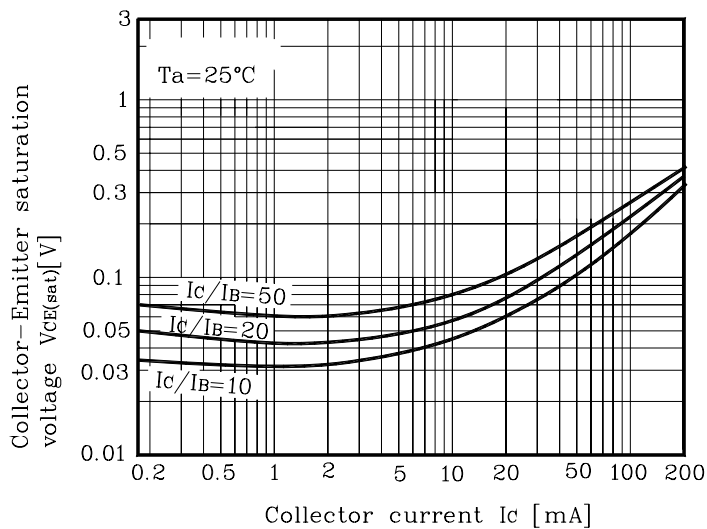
Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	$V_{\text{CBO}}$	60	V
Collector-Emitter voltage	$V_{\text{CEO}}$	50	V
Emitter-Base voltage	$V_{\text{EBO}}$	5	V
Collector current	$I_{\text{C}}$	150	mA
Collector dissipation	$P_{\text{C}}$	625	mW
Junction temperature	$T_{\text{j}}$	150	$^{\circ}\text{C}$
Storage temperature	$T_{\text{stg}}$	-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	$BV_{\text{CBO}}$	$I_{\text{C}}=100\mu\text{A}$ , $I_{\text{E}}=0$	60	-	-	V
Collector-Emitter breakdown voltage	$BV_{\text{CEO}}$	$I_{\text{C}}=1\text{mA}$ , $I_{\text{B}}=0$	50	-	-	V
Emitter-Base breakdown voltage	$BV_{\text{EBO}}$	$I_{\text{E}}=10\mu\text{A}$ , $I_{\text{C}}=0$	5	-	-	V
Collector cut-off current	$I_{\text{CBO}}$	$V_{\text{CB}}=60\text{V}$ , $I_{\text{E}}=0$	-	-	0.1	$\mu\text{A}$
Emitter cut-off current	$I_{\text{EBO}}$	$V_{\text{EB}}=5\text{V}$ , $I_{\text{C}}=0$	-	-	0.1	$\mu\text{A}$
DC current gain	$h_{\text{FE}}^*$	$V_{\text{CE}}=6\text{V}$ , $I_{\text{C}}=2\text{mA}$	70	-	700	-
Collector-Emitter saturation voltage	$V_{\text{CE(sat)}}$	$I_{\text{C}}=100\text{mA}$ , $I_{\text{B}}=10\text{mA}$	-	-	0.25	V
Transistion frequency	$f_{\text{T}}$	$V_{\text{CE}}=10\text{V}$ , $I_{\text{C}}=1\text{mA}$	80	-	-	MHz
Collector output capacitance	$C_{\text{ob}}$	$V_{\text{CB}}=10\text{V}$ , $I_{\text{E}}=0$ , $f=1\text{MHz}$	-	2	3.5	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

\* :  $h_{\text{FE}}$  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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