

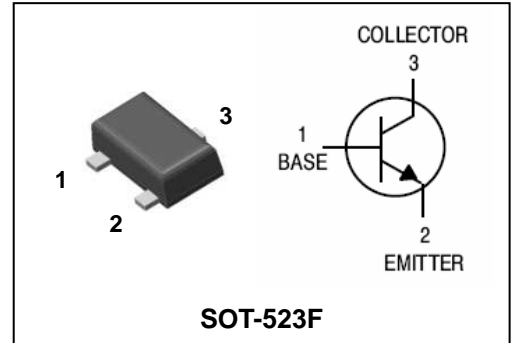
## Description

- General small signal amplifier

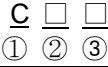
## Features

- Low collector saturation voltage :  $V_{CE(sat)} = 0.25V(\text{Max.})$
- Low output capacitance :  $C_{ob} = 2pF(\text{Typ.})$
- Complementary pair with 2SA1980EF

## PIN Connection



## Ordering Information

Type NO.	Marking	Package Code
2SC5343EF		SOT-523F
<small>① Device Code ② hFE Rank ③ Year&amp;Week Code</small>		

## Absolute maximum ratings

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

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	$V_{CB0}$	60	V
Collector-Emitter voltage	$V_{CEO}$	50	V
Emitter-Base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	150	mA
Collector dissipation	$P_C$	150	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 ~ 150	$^\circ\text{C}$

## Electrical Characteristics

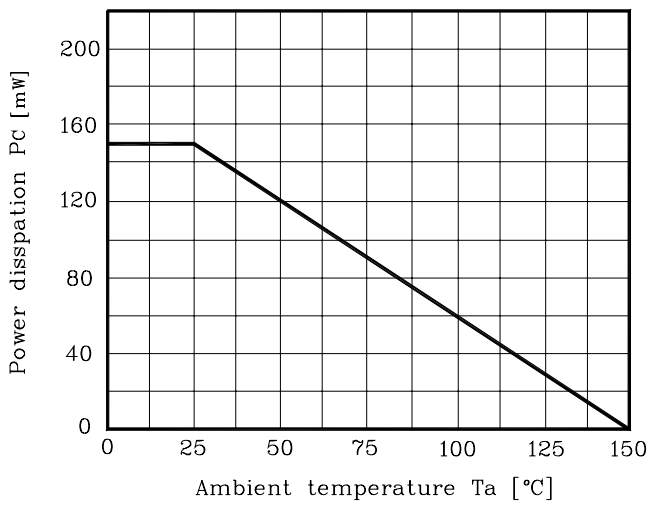
 $T_a = 25^\circ\text{C}$ 

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	$BV_{CB0}$	$I_C = 100\mu\text{A}, I_E = 0$	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	$I_{CB0}$	$V_{CB} = 60\text{V}, I_E = 0$	-	-	0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5\text{V}, I_C = 0$	-	-	0.1	$\mu\text{A}$
DC current gain	$h_{FE}^*$	$V_{CE} = 6\text{V}, I_C = 2\text{mA}$	70	-	700	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100\text{mA}, I_B = 10\text{mA}$	-	-	0.25	V
Transistion frequency	$f_T$	$V_{CE} = 10\text{V}, I_C = 1\text{mA}$	80	-	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$	-	2	3.5	pF
Noise figure	NF	$V_{CE} = 6\text{V}, I_C = 0.1\text{mA}, f = 1\text{KHz}, R_g = 10\text{K}\Omega$	-	-	10	dB

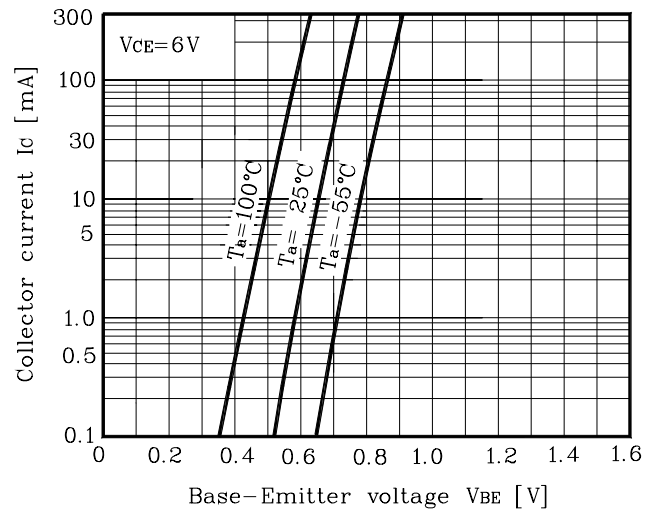
\* :  $h_{FE}$  rank / O : 70 ~ 140, Y : 120 ~ 240, G : 200 ~ 400, L : 300 ~ 700

## Electrical Characteristic Curves

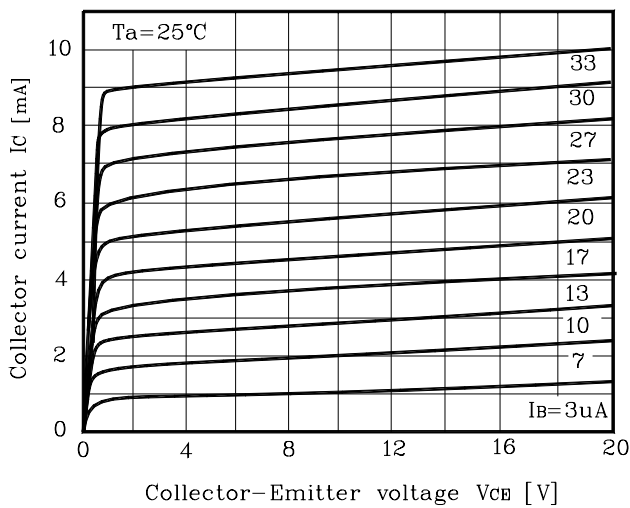
**Fig. 1  $P_C - T_a$**



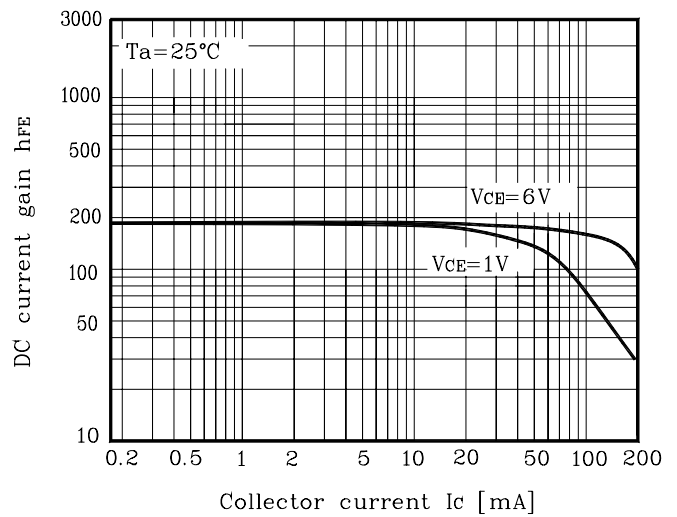
**Fig. 2  $I_C - V_{BE}$**



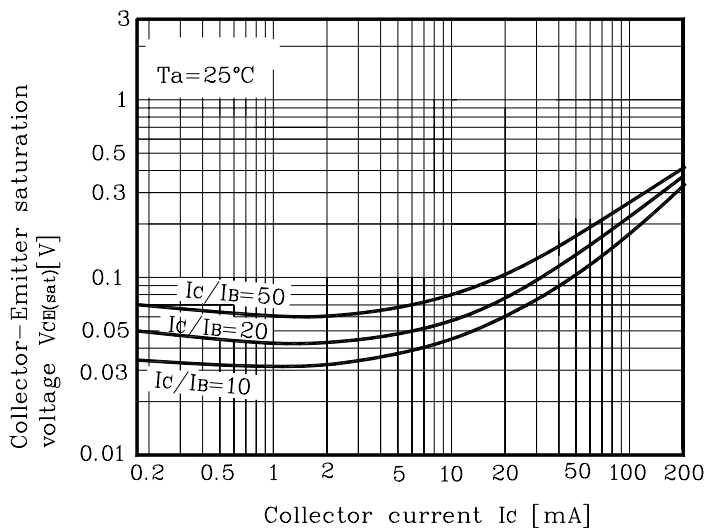
**Fig. 3  $I_C - V_{CE}$**



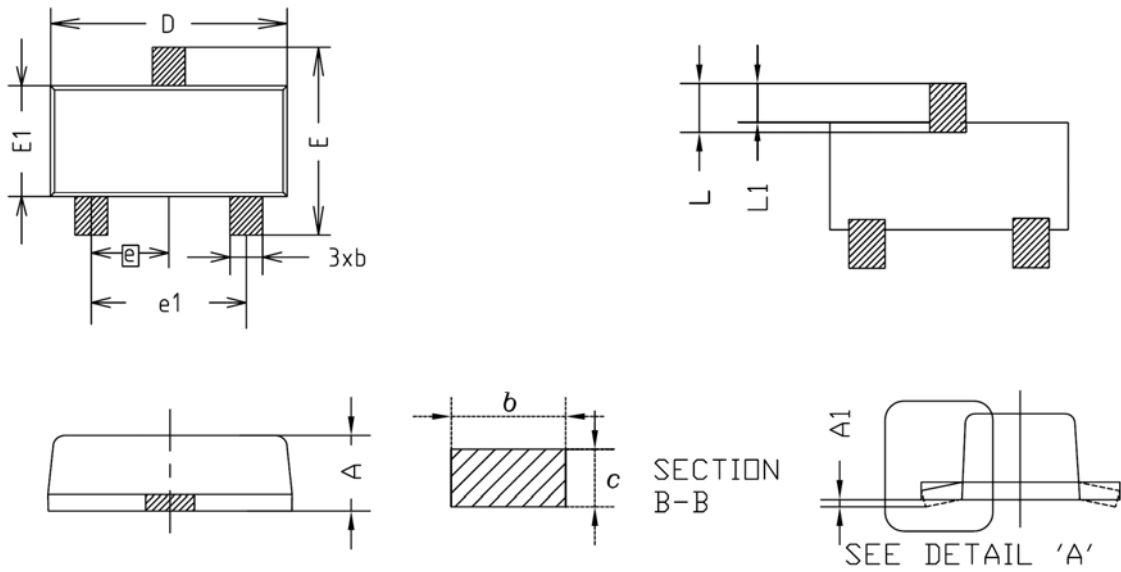
**Fig. 4  $h_{FE} - I_C$**



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

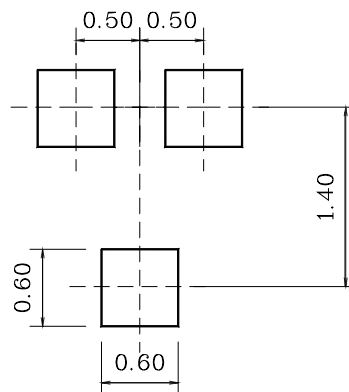


Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	0.63	0.68	0.73	
A1	0.00	-	0.10	
A2	-	-	-	
b	0.25	0.30	0.35	
c	0.04	0.11	0.20	
D	1.50	1.60	1.70	
E	1.50	1.60	1.70	
E1	0.78	0.88	0.98	
e	0.50BSC			
e1	0.90	-	1.10	
L	0.34	0.44	0.54	
L1	0.28	0.34	0.43	

※Recommend PCB solder land [Unit: mm]



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