

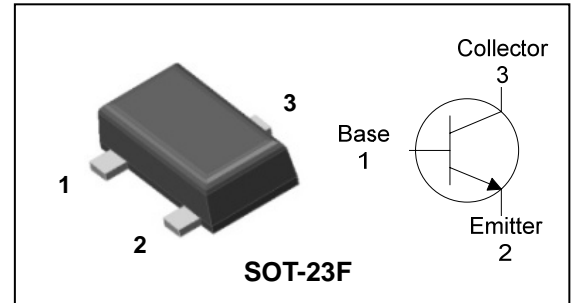
## Descriptions

- General small signal amplifier
- Switching application

## Features

- Low collector saturation voltage
- Collector output capacitance
- Complementary pair with STN3906SF

## PIN Connection



## Ordering Information

Type NO.	Marking	Package Code
STN3904SF	KA □ ① ②	SOT-23F

① Device Code ② Year&Week Code

## Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	$V_{CBO}$	60	V
Collector-Emitter voltage	$V_{CEO}$	40	V
Emitter-Base voltage	$V_{EBO}$	6	V
Collector current	$I_C$	100	mA
Collector dissipation	$P_C^*$	350	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 ~ 150	°C

\* : Package mounted on 99.5% Alumina 10×8×0.6

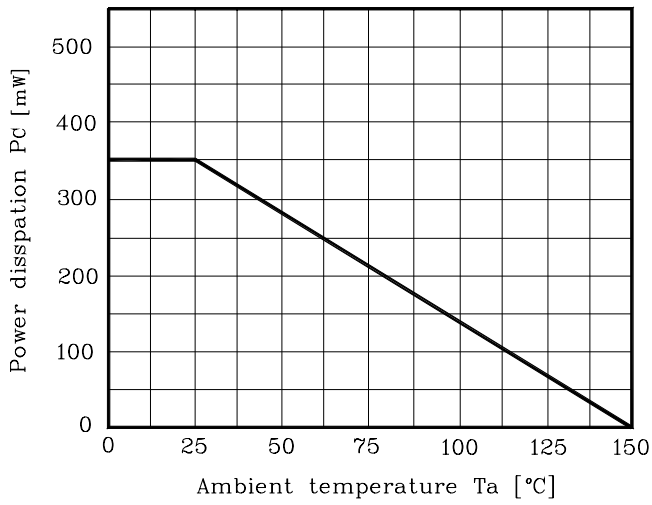
## Electrical Characteristics

(Ta=25°C)

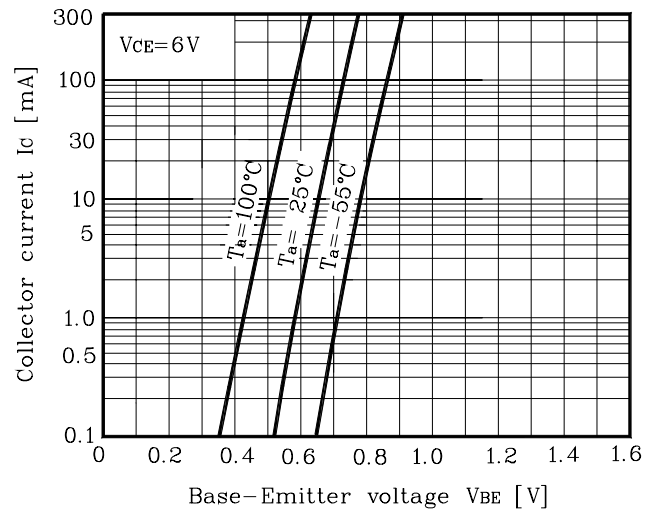
Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	$BV_{CBO}$	$I_C=10\mu A, I_E=0$	60	-	-	V
Collector-Emitter breakdown voltage	$BV_{CEO}$	$I_C=1mA, I_B=0$	40	-	-	V
Emitter-Base breakdown voltage	$BV_{EBO}$	$I_E=10\mu A, I_C=0$	6	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60V, I_E=0$	-	-	0.1	μA
DC current gain	$h_{FE}$	$V_{CE}=1V, I_C=10mA$	100	-	300	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C=50mA, I_B=5mA$	-	-	0.4	V
Transition frequency	$f_T$	$V_{CE}=20V, I_C=10mA$	300	-	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CE}=5V, I_E=0, f=1MHz$	-	-	4	pF

## Electrical Characteristic Curves

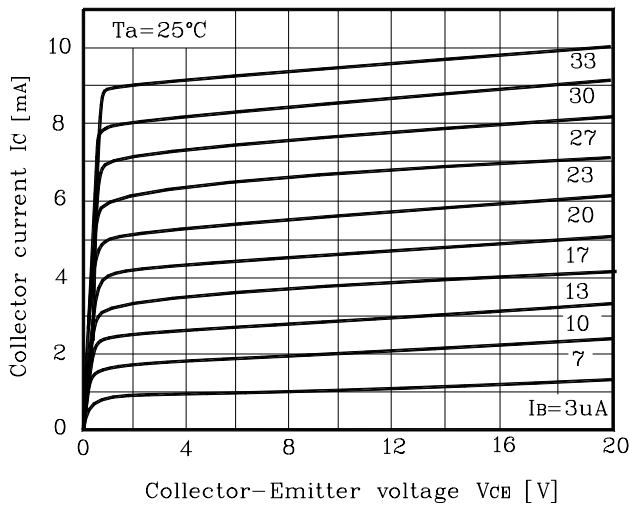
**Fig. 1  $P_C - T_a$**



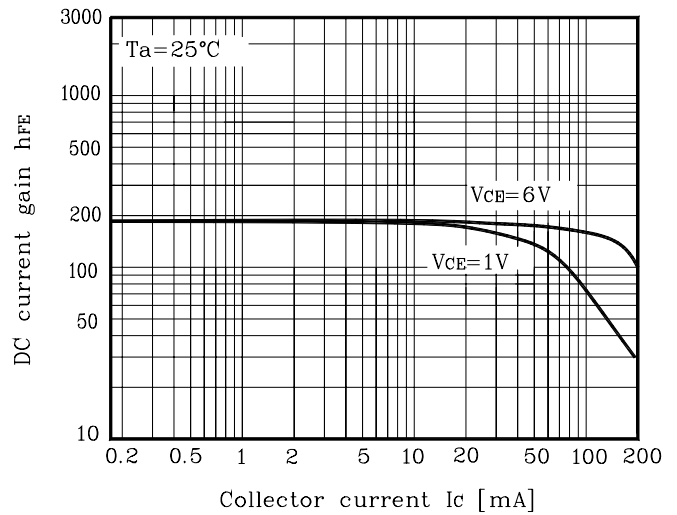
**Fig. 2  $I_C - V_{BE}$**



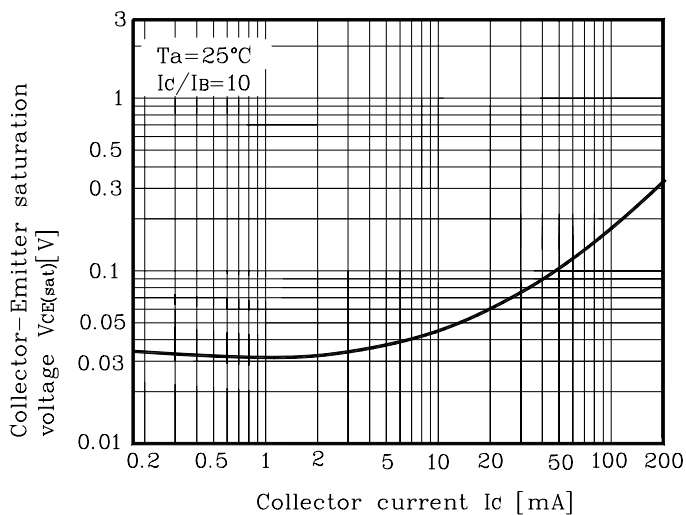
**Fig. 3  $I_C - V_{CE}$**



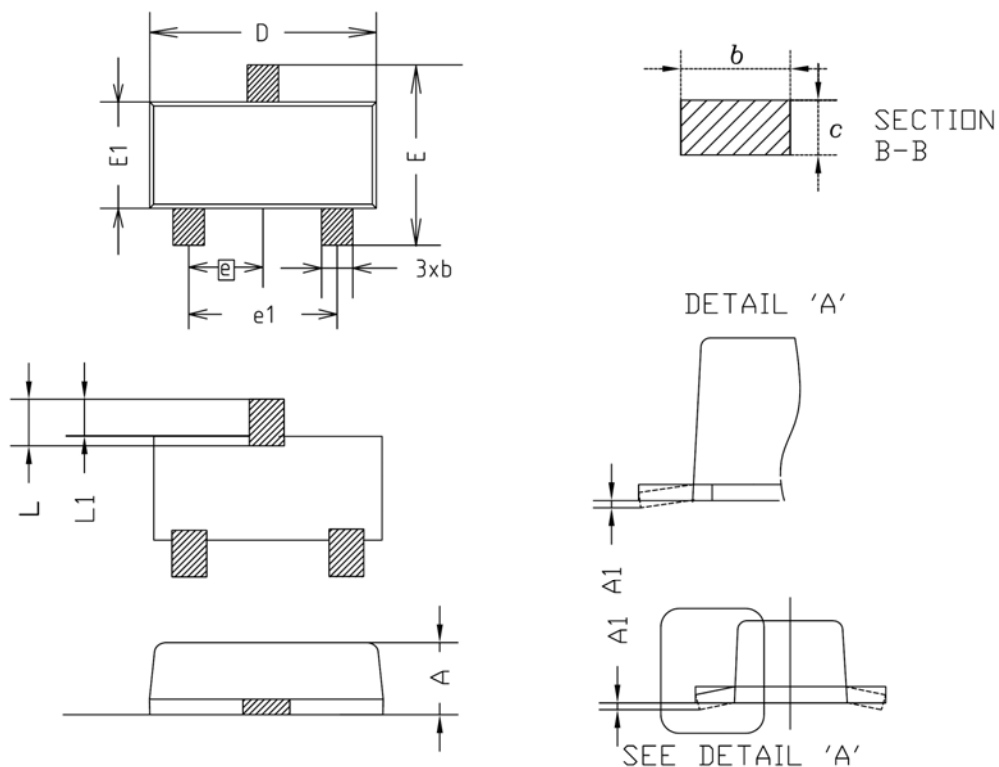
**Fig. 4  $h_{FE} - I_C$**



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

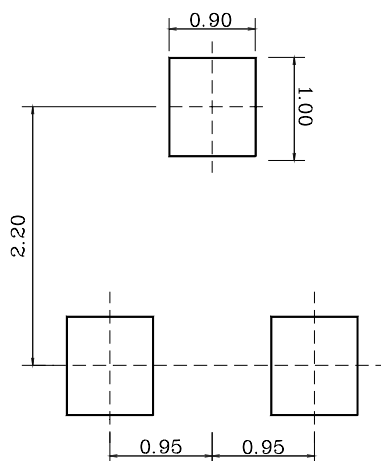


## Outline Dimension



SYMBOL	MILLIMETER(mm)			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	0.80	0.90	1.00	
A1	0.00	-	0.10	
b	0.35	0.40	0.45	
c	0.10	0.15	0.20	
D	2.80	2.90	3.00	
E	2.30	2.40	2.50	
E1	1.50	1.60	1.70	
e	0.95BSC			
e1	1.80	1.90	2.00	
L	0.48	0.58	0.68	
L1	0.30	-	0.50	

※Recommend PCB solder land [Unit: mm]



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