

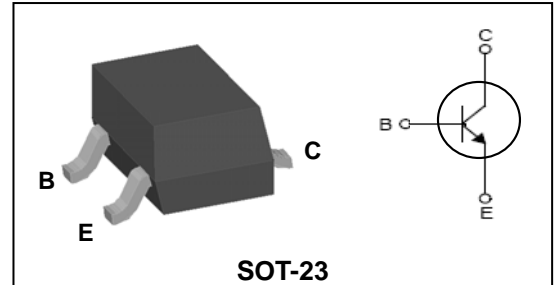
Descriptions

- General small signal amplifier
- Switching application

Features

- Low collector saturation voltage
- Collector output capacitance
- Complementary pair with STN3906S

PIN Connection



Ordering Information

Type NO.	Marking	Package Code
STN3904S	$\frac{KA}{\text{① ②}}$	SOT-23

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 $P_C - T_a$

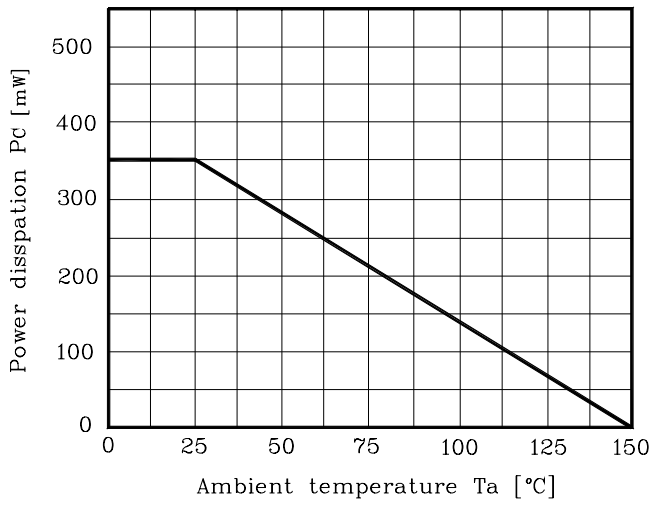


Fig. 2 $I_C - V_{BE}$

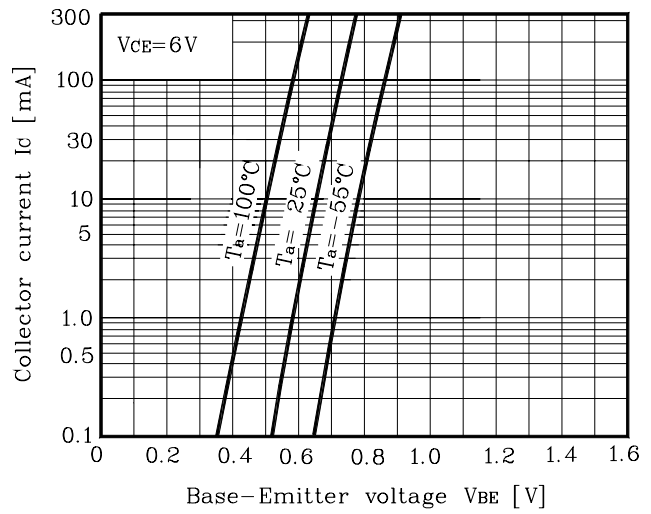


Fig. 3 $I_C - V_{CE}$

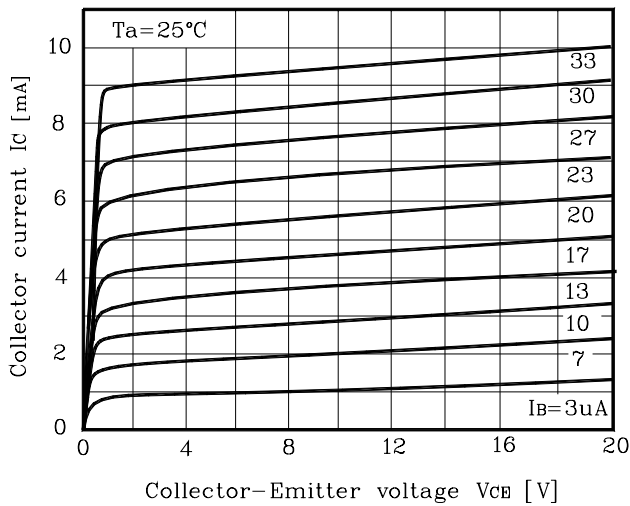


Fig. 4 $h_{FE} - I_C$

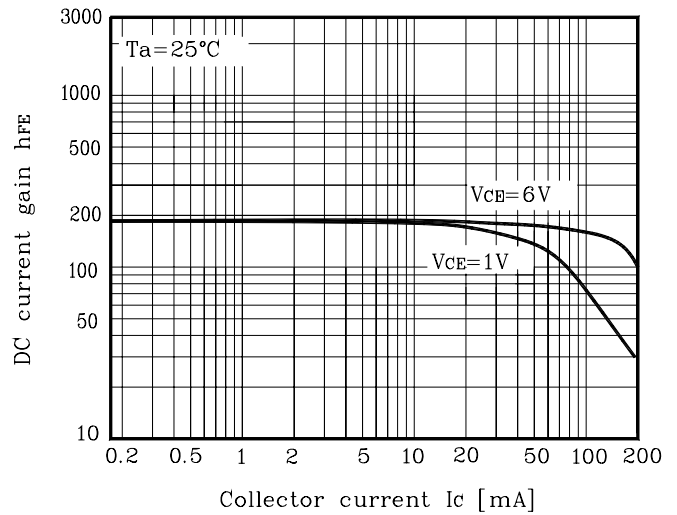
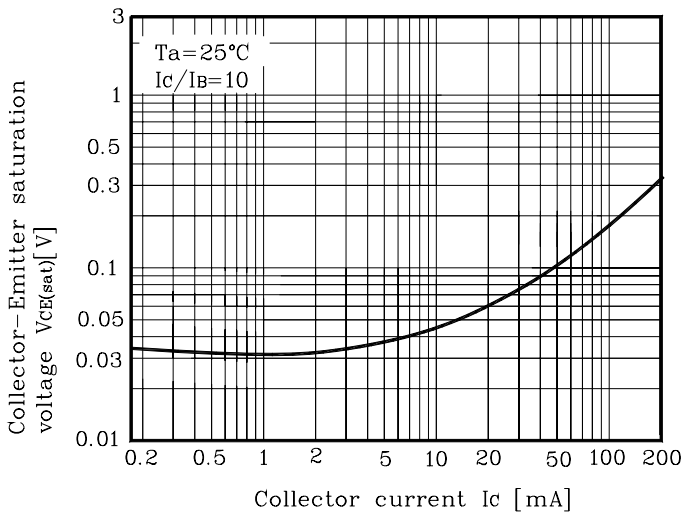
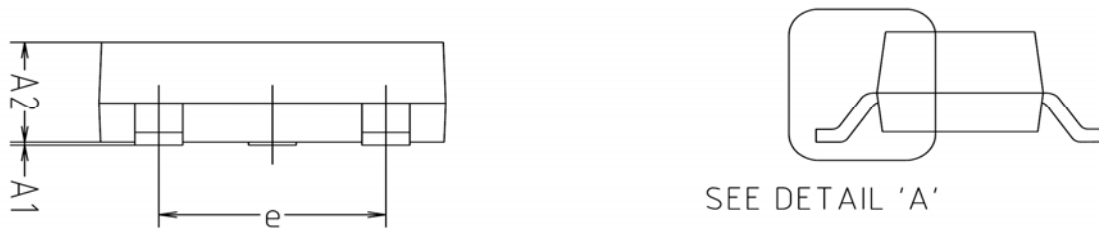
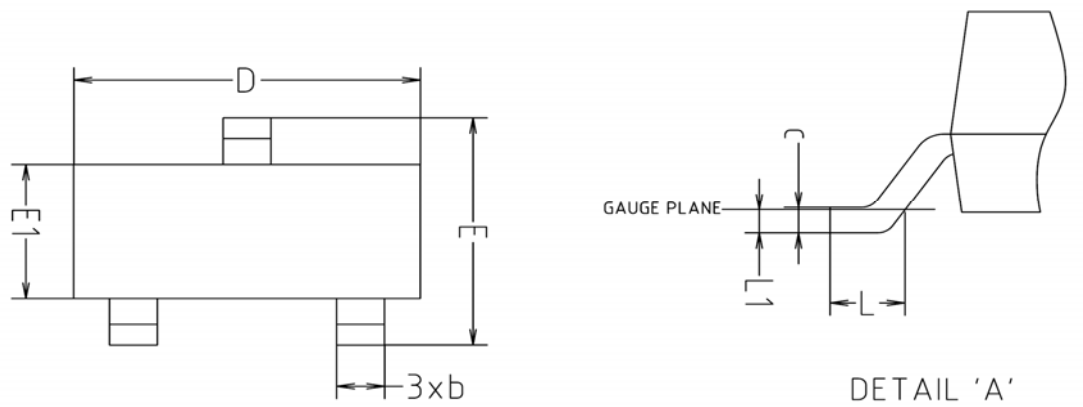


Fig. 5 $V_{CE(sat)} - I_C$

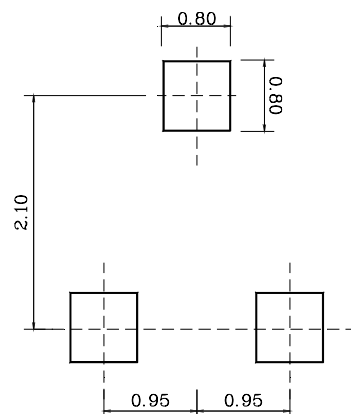


Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A1	0.00	-	0.10	
A2	0.82	-	1.02	
b	0.39	0.42	0.45	
c	0.09	0.12	0.15	
D	2.80	2.90	3.00	
E	2.20	2.40	2.60	
E1	1.20	1.30	1.40	
e	1.90BSC			
L	0.20	-	-	
L1	0.12BSC			

※Recommend PCB solder land [Unit: mm]



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