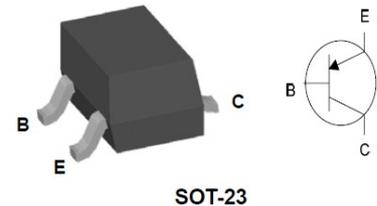


## Descriptions

- General purpose small signal amplifier
- Switching application

## PIN Connection



## Features

- Collector saturation voltage:  
 $V_{CE(sat)} = -0.5V(\text{Max.}) @ I_C = -50\text{mA}, I_B = -5\text{mA}$
- Low output capacitance:  
 $C_{ob} = 4.5\text{pF}(\text{Max.}) @ V_{CB} = -5V, I_E = 0, f = 1\text{MHz}$
- Complementary pair with KTN3904S

## Ordering Information

Type NO.	Marking	Package Code
KTN3906S	JA □ • ① ②	SOT-23

① Device Code    ② Year & Week Code    • Dalian

## Absolute maximum ratings

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

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	$V_{CBO}$	-40	V
Collector-Emitter voltage	$V_{CEO}$	-40	V
Emitter-Base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-100	mA
Collector power dissipation	$P_C^*$	350	mW
Junction temperature	$T_J$	150	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-50~150	$^\circ\text{C}$

\* : Package mounted on 99.5% alumina  $10 \times 8 \times 0.6\text{mm}$

## Electrical Characteristics

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

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	$BV_{CBO}$	$I_C = -10 \mu\text{A}, I_E = 0$	-40	-	-	V
Collector-Emitter breakdown voltage	$BV_{CEO}$	$I_C = -1\text{mA}, I_B = 0$	-40	-	-	V
Emitter-Base breakdown voltage	$BV_{EBO}$	$I_E = -10 \mu\text{A}, I_C = 0$	-5	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -40V, I_E = 0$	-	-	-0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE} = -1V, I_C = -10\text{mA}$	100	-	300	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C = -50\text{mA}, I_B = -5\text{mA}$	-	-	-0.5	V
Transition frequency	$f_T$	$V_{CE} = -20V, I_C = -10\text{mA}$	250	-	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -5V, I_E = 0, f = 1\text{MHz}$	-	-	4.5	pF

Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

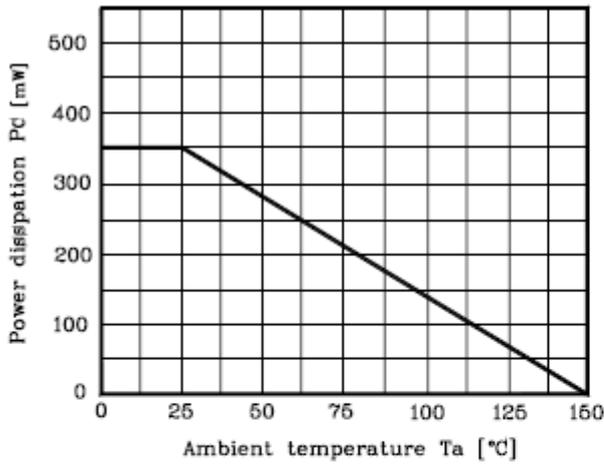


Fig. 2  $I_C - V_{BE}$

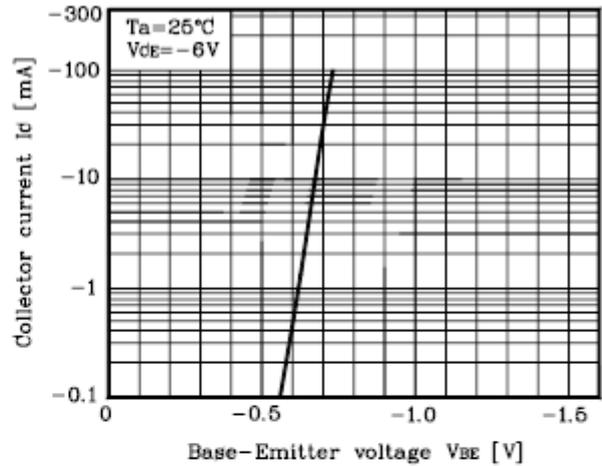


Fig. 3  $h_{FE} - I_C$

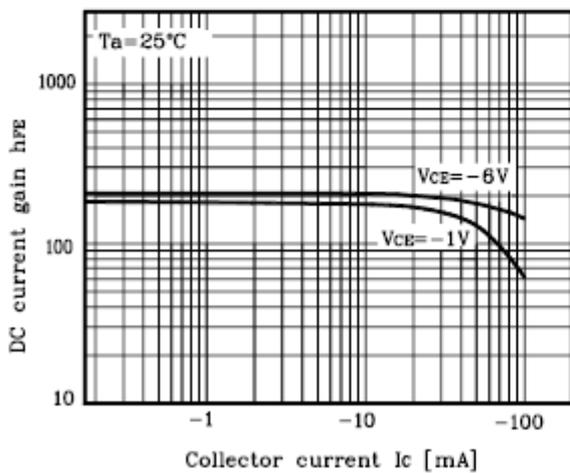


Fig. 4  $I_C - V_{CE}$

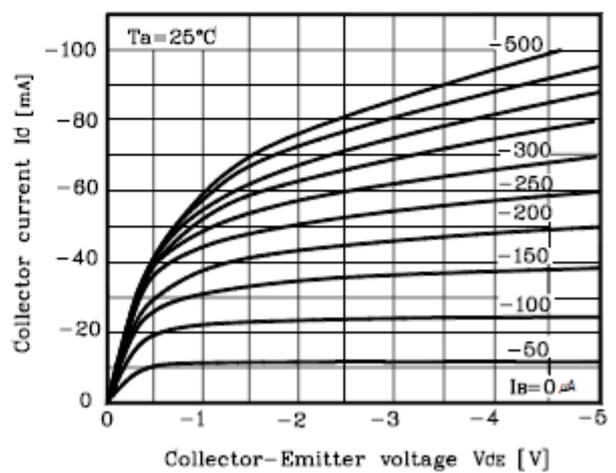
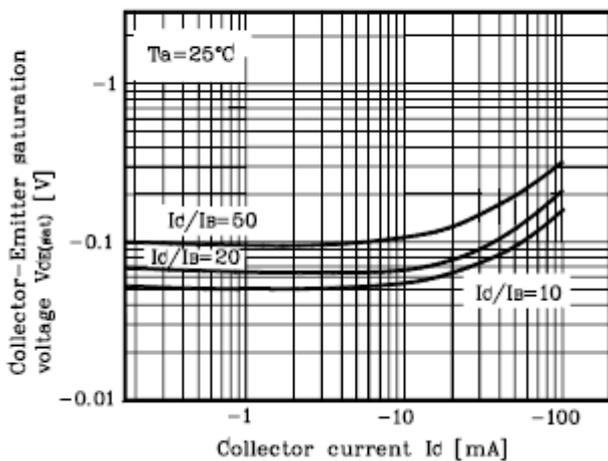
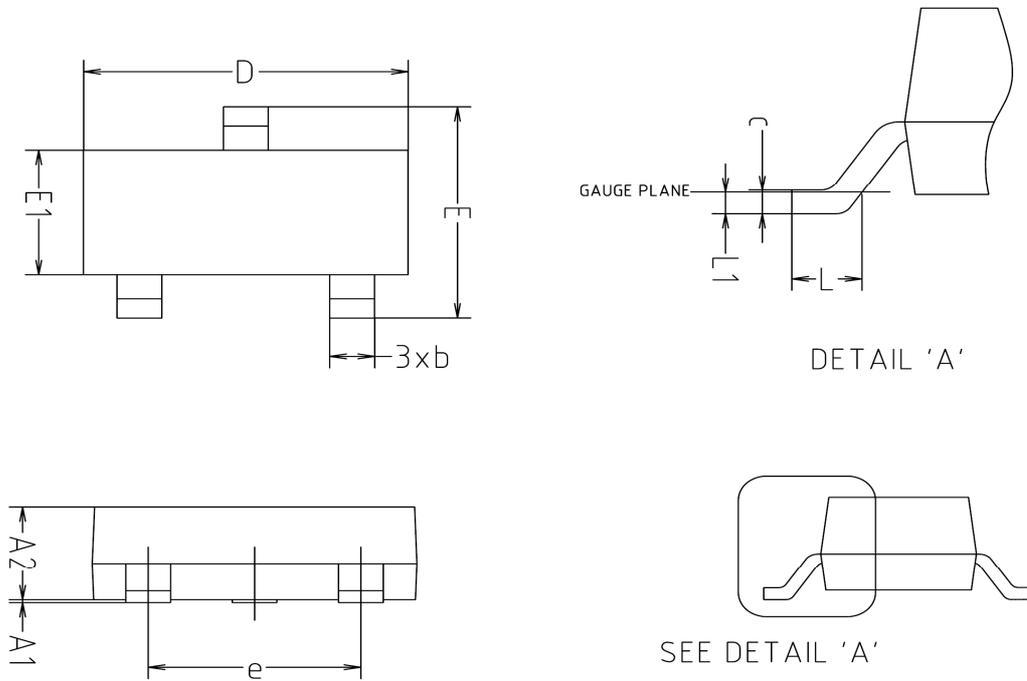


Fig. 5  $V_{CE(sat)} - I_C$

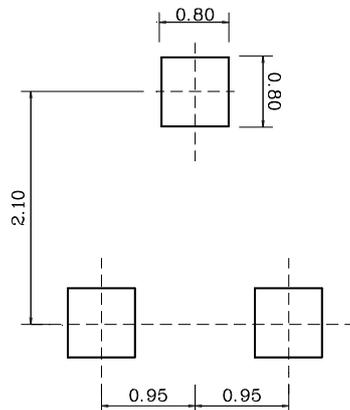


## Outline Dimensions



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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