

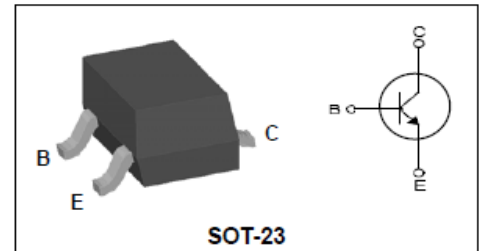
Descriptions

- General small signal amplifier
- Switching application

Features

- Low collector saturation voltage
- Collector output capacitance
- Complementary pair with KTN3906S

PIN Connection



Ordering Information

Type NO.	Marking	Package Code
KTN3904S	$\frac{KA}{\textcircled{1} \textcircled{2}}$ •	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_{CB0}	60	V
Collector-Emitter voltage	V_{CE0}	40	V
Emitter-Base voltage	V_{EB0}	6	V
Collector current	I_C	100	mA
Collector dissipation	P_C^*	350	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-50~15	$^\circ\text{C}$

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

Electrical Characteristics

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

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CB0}	$I_C=10 \mu\text{A}, I_E=0$	60	-	-	V
Collector-Emitter breakdown voltage	BV_{CE0}	$I_C=1\text{mA}, I_B=0$	40	-	-	V
Emitter-Base breakdown voltage	BV_{EB0}	$I_E=10 \mu\text{A}, I_C=0$	6	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB}=60\text{V}, I_E=0$	-	-	0.1	μA
DC current gain	h_{FE}	$V_{CE}=1\text{V}, I_C=10\text{mA}$	100	-	300	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C=50\text{mA}, I_B=5\text{mA}$	-	-	0.4	V
Transition frequency	f_T	$V_{CE}=20\text{V}, I_C=10\text{mA}$	300	-	-	MHz
Collector output capacitance	C_{ob}	$V_{CE}=5\text{V}, I_E=0, f=1\text{MHz}$	-	-	4	pF

Electrical Characteristic Curves

Fig. 1 $P_C - T_a$

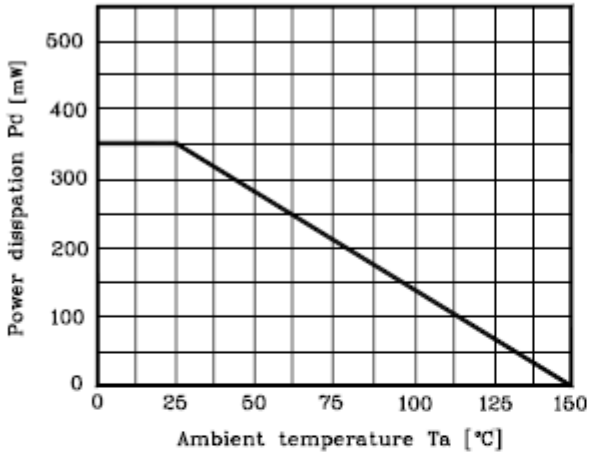


Fig. 2 $I_C - V_{BE}$

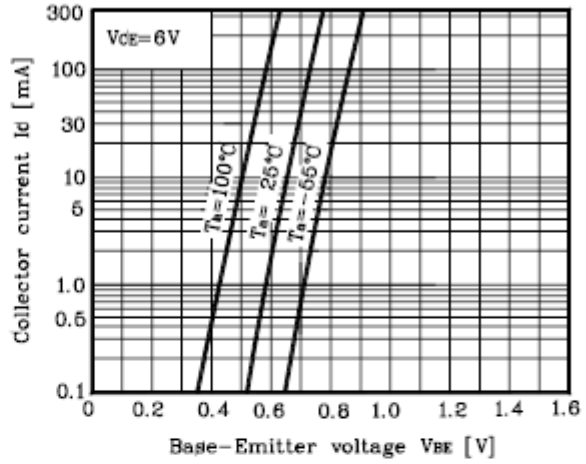


Fig. 3 $I_C - V_{CE}$

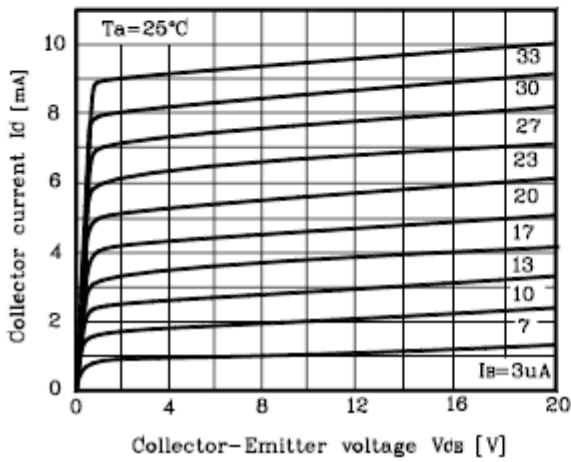


Fig. 4 $h_{FE} - I_C$

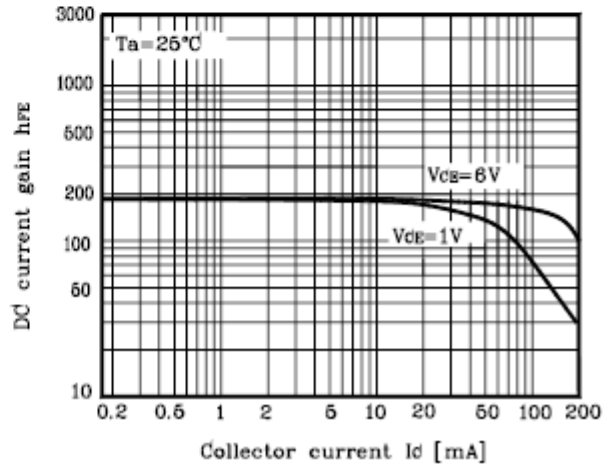
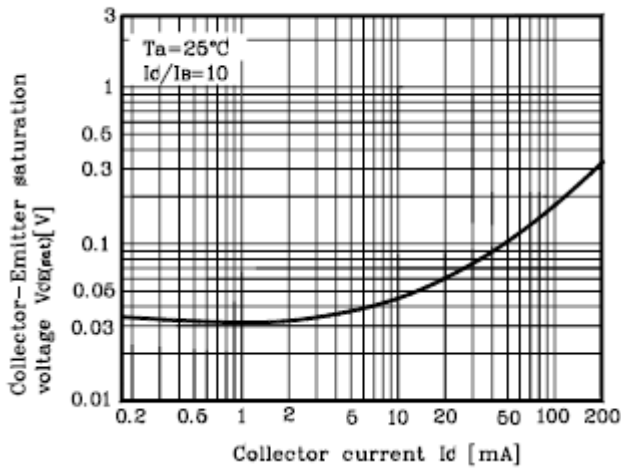
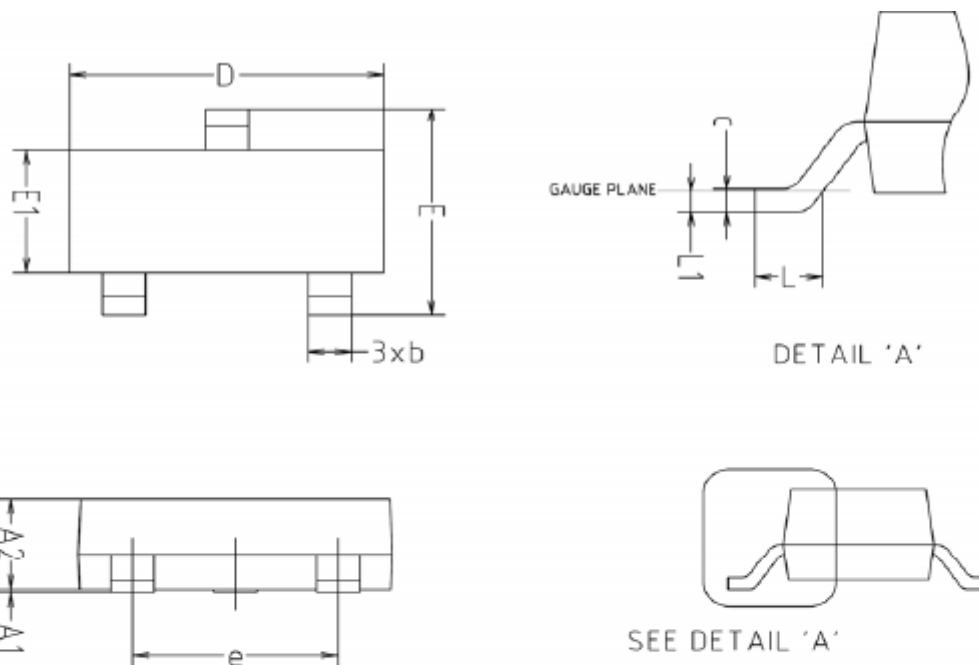


Fig. 5 $V_{CE(sat)} - I_C$

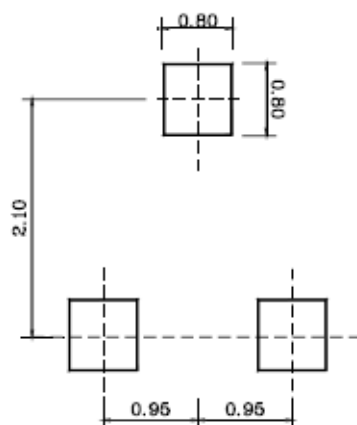


Outline Dimension



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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