

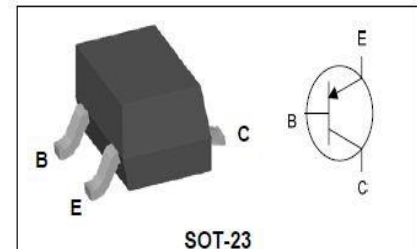
Description

- General small signal amplifier

PIN Connection

Features

- Low collector saturation voltage:
 $V_{CE(sat)} = -0.3V(\text{Max.})$
- Low output capacitance : $C_{ob} = 4pF(\text{Typ.})$
- Complementary pair with KC5343S



Ordering Information

Type NO.	Marking	Package Code
KA1980S	CA □ □ . ① ② ③	SOT-23

① Device Code ② HFE Grade ③ Year & Week Code • Dalian

Absolute Maximum Ratings

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

Characteristic	Symbol	Ratings	Unit
Collector-base voltage	V_{CBO}	-50	V
Collector-emitter voltage	V_{CEO}	-50	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-150	mA
Collector power dissipation	P_C^*	350	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55~150	$^\circ\text{C}$

* 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-emitter breakdown voltage	BV_{CEO}	$I_C = -1\text{mA}, I_B = 0$	-50	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB} = -50\text{V}, I_E = 0$	-	-	-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$	-	-	-0.1	μA
DC current gain	h_{FE}^*	$V_{CE} = -6\text{V}, I_C = -2\text{mA}$	70	-	700	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}, I_B = -10\text{mA}$	-	-	-0.3	V
Transition frequency	f_T	$V_{CE} = -10\text{V}, I_C = -1\text{mA}$	80	-	-	MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$	-	4	-	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 $P_C - T_a$

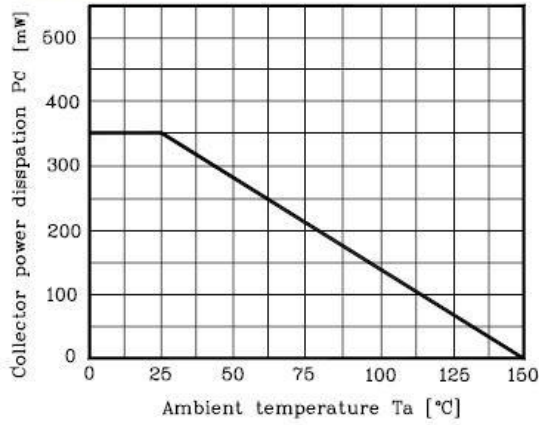


Fig. 2 $I_C - V_{BE}$

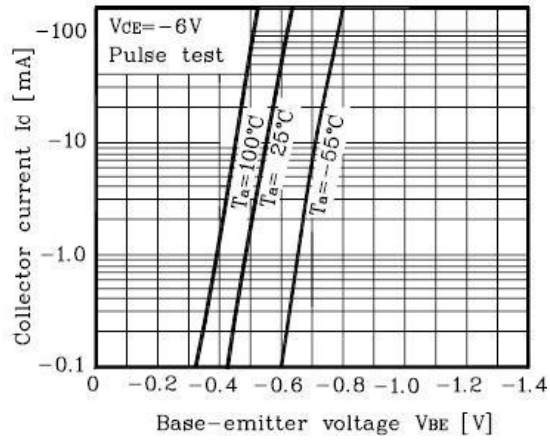


Fig. 3 $I_C - V_{CE}$

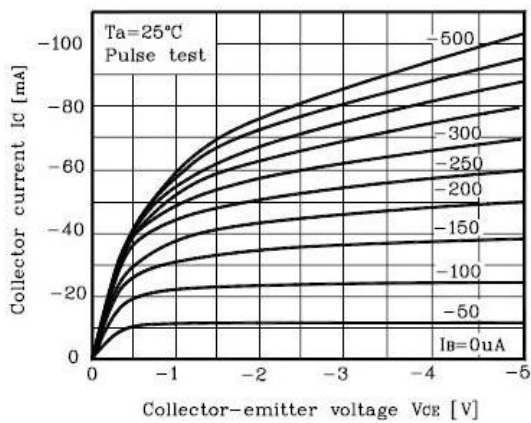


Fig. 4 $h_{FE} - I_C$

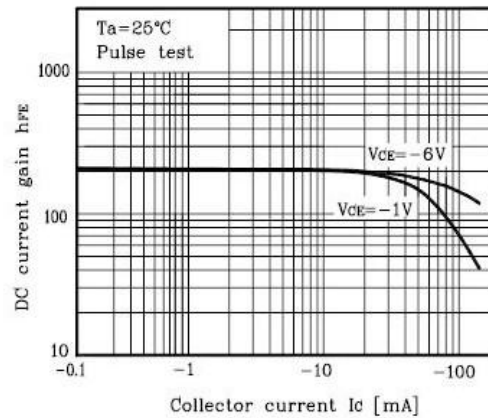
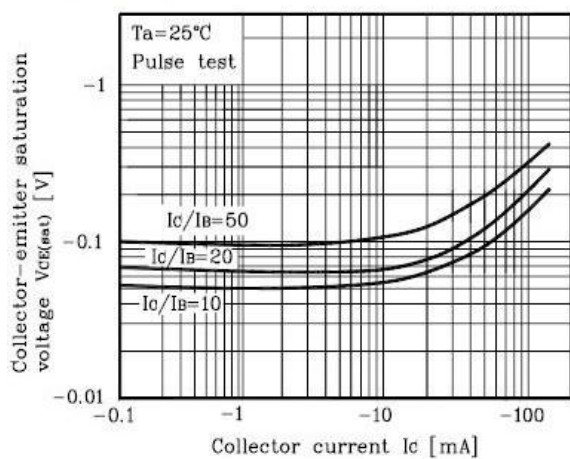
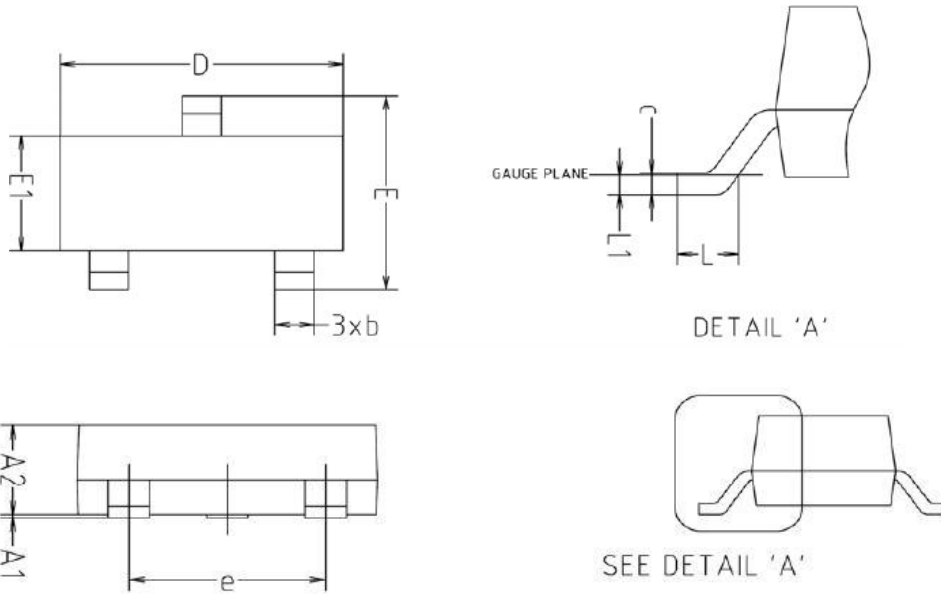


Fig. 5 $V_{CE(sat)} - I_C$

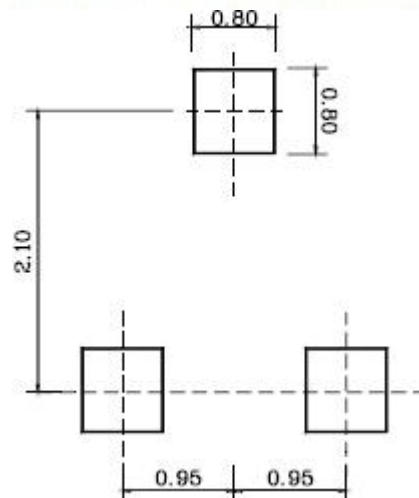


Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
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]



The AUK Dalian Corp. products are intended for the use as components in general electronic equipment (Office and communication equipment, measuring equipment, home appliance, etc.).

Please make sure that you consult with us before you use these AUK Dalian Corp. products in equipments which require high quality and / or reliability, and in equipments which could have major impact to the welfare of human life(atomic energy control, airplane, spaceship, transportation, combustion control, all types of safety device, etc.). AUK Dalian Corp. cannot accept liability to any damage which may occur in case these AUK Dalian Corp. products were used in the mentioned equipments without prior consultation with AUK Dalian Corp..

Specifications mentioned in this publication are subject to change without notice.