



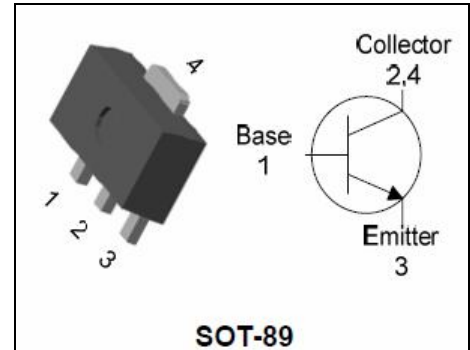
## Descriptions

- **Medium power amplifier**

## Features

- $P_c$ (Collector power dissipation)=2W  
(Ceramic substrate of 250 mm<sup>2</sup>×0.8t used)
- Low collector saturation voltage :  
 $V_{CE(sat)}$ =0.5V(Typ.)
- Complementary pair with KTB1188
- “Green” device and RoHS compliant device
- Available in full lead (Pb)-free device

## PIN Connection



## Ordering Information

Type NO.	Marking	Package Code
KTD1766	B2• □YWW	SOT-89

B2: Device code, • : Dalian, □: HFE Rank, YWW(Y: Year code, WW : Weekly code)

## Absolute maximum ratings

Characteristic	Symbol	Rating	Unit
Collector-Base voltage	$V_{CB0}$	40	V
Collector-Emitter voltage	$V_{CEO}$	32	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_c$	2	A(DC)
	$I_{CP}^*$	4	A(Pulse)
Collector Power dissipation	$P_c$	0.5	W
	$P_{C}^{**}$	1	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55~150	°C

\* : Single pulse,  $t_p=300 \mu s$

Characteristic		Symbol	Typ.	Max	Unit
Thermal resistance	Junction-ambient	$R_{th(J-A)}$	-	250.0	°C/W
		$R_{th(J-A)}^{**}$	-	125.0	

\*: Single pulse ,  $t_p=300\mu s$

\*\* : When mounted on ceramic substrate (250mm<sup>2</sup> x 0.8t)

**Electrical Characteristics (Ta=25° C)**

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	$V_{(BR)CBO}$	$I_C=50\mu A, I_E=0$	40	-	-	V
Collector-Emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	32	-	-	V
Emitter-Base breakdown voltage	$V_{(BR)EB}$	$I_C=50\mu A, I_B=0$	5	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB}=20V, I_E=0$	-	-	1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4V, I_C=0$	-	-	1	$\mu A$
DC current gain	$h_{FE} *$	$V_{CE}=3V, I_C=0.5A$	100	-	320	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C=2A, I_B=200mA$	-	0.5	0.8	V
Transition frequency	$f_T$	$V_{CB}=5V, I_C=0.5A$	-	100	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	30	-	pF

\*  $h_{FE}$  rank : O: 100~200, Y: 160~320

Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

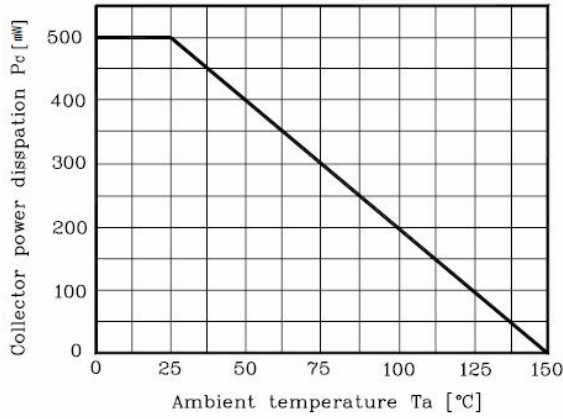


Fig. 2  $I_C - V_{BE}$

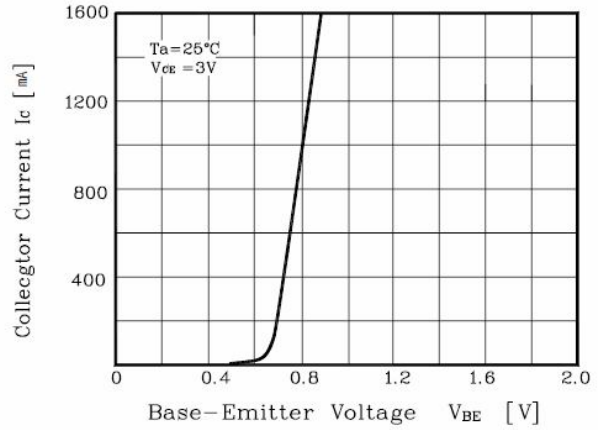


Fig. 3  $I_C - V_{CE}$

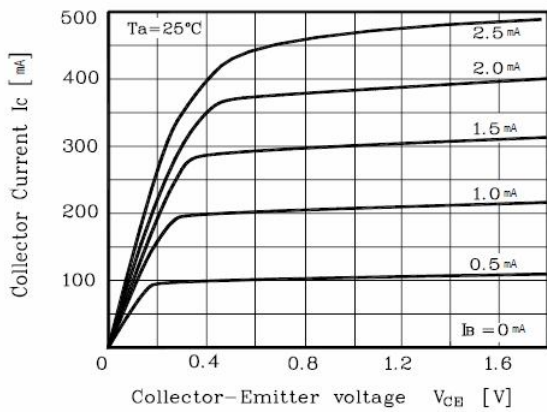


Fig. 4  $V_{CE(sat)} - I_C$

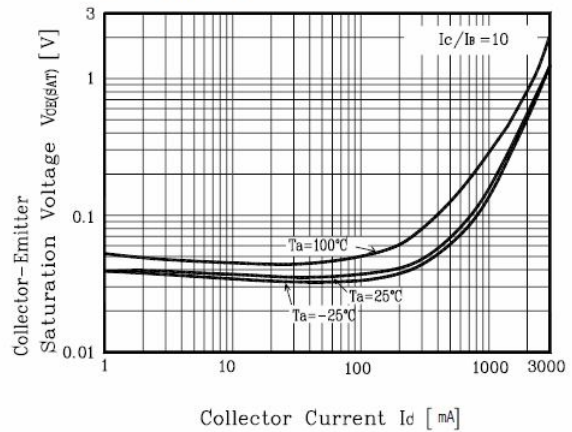
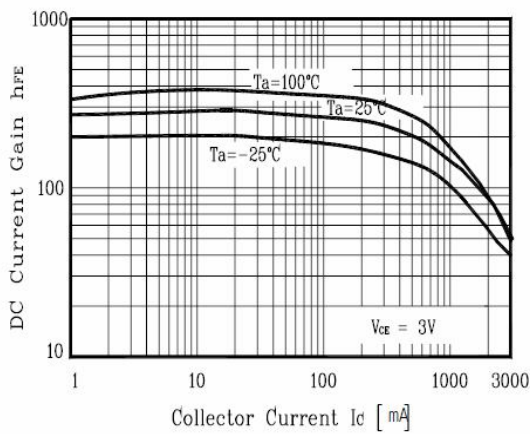
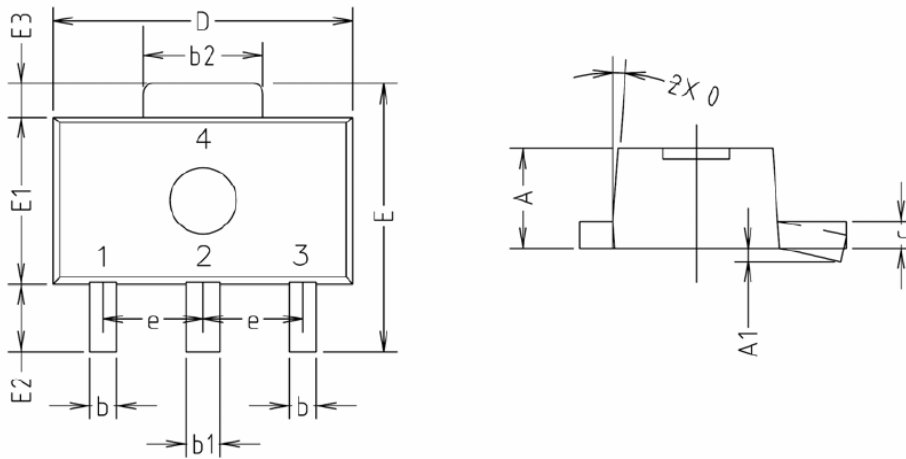


Fig. 5  $h_{FE} - I_C$

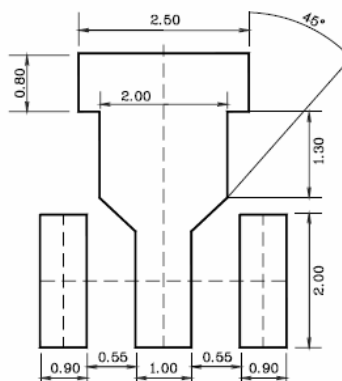


Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	1.40	1.50	1.60	
A1	0.00	—	0.10	
b	0.38	0.42	0.48	
b1	0.48	0.52	0.58	
b2	1.79	1.82	1.87	
c	0.40	0.42	0.46	
D	4.40	4.50	4.70	
E	3.70	4.00	4.30	
E1	2.40	2.50	2.70	
E2	0.80	1.00	1.20	
E3	0.40	0.50	0.60	
e	1.50 TYP.			
θ	4° TYP.			

※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.**