KODENSHI AUK

KTA104F

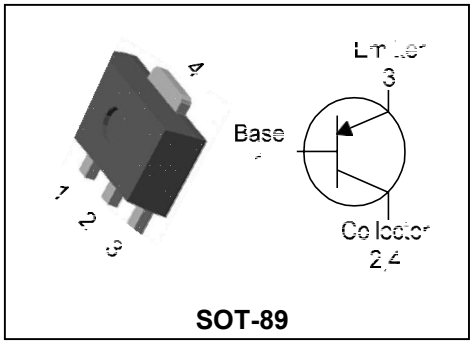
PNP Silicon Transistor

RoHS Pb

Applications

- General purpose amplifier
- High Voltage application

PIN Connection



SOT-89

Features

- Low saturation switching application
  : $V_{CE(sat)}$=-0.4V(MAX.)
- Voltage regulation application
- Complementary pair with KTC401F
- Available in full lead (Pb)-free device

Ordering Information

Type NO.	Marking	Package Code
KTA104F	A104 YWW•	SOT-89

A104: DEVICE CODE, YWW(Y : Year code, WW : Weekly code) . Dalian

Absolute Maximum Ratings

[Ta=25℃]

Characteristic	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-80	V
Collector-emitter voltage	V_{CEO}	-60	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-1	A(DC)
	I_{CP}*	-2	A(Pulse)
Collector Power dissipation	P_C	0.5	W
	P_C**	1	W
Junction temperature	T_J	150	°C
Storage temperature range	T_{stg}	-55~150	°C

* : Single pulse, tp= 300 μs

** : Device mounted on ceramic substrate (250mm^2 x 0.8t)

Characteristic		Symbol	Typ.	Max	Unit
Thermal resistance	Junction-ambient	$R_{th(J-a)}$	-	250	℃/W
			-	125**	℃/W

Electrical Characteristics (Ta=25 C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	I_C=-100μA, I_E=0	-80	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	I_C=-1mA, I_B=0	-60	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	I_E=-10 mA, I_C=0	-5	-	-	V
Collector cut-off current	I_{CBO}	V_{CB}=-60V, I_E=0	-	-	-0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=-5V, I_C=0	-	-	-0.1	μA
DC current gain	h_{FE} 1)	V_{CE}=-2V, I_C= -100 mA	200	-	400	-
		V_{CE}=-2V, I_C= -1A	40	-	-	-
Base-Emitter turn on voltage	$V_{BE(ON)}$ 2)	V_{CE}=-2V, I_C= -500 mA	-	-	-1.2	V
Collector-Emitter saturation voltage	$V_{CE(sat)}$ 2)	I_C=-500 mA, I_B=-50 mA	-	-	-0.4	V
Collector output capacitance	C_{ob}	V_{CB}=-10V, I_E=0, f=1 MHz	-	10	-	pF
Transition frequency	f_T	V_{CE}=-10V, I_C= -50 mA	-	160	-	MHz

* Note 1) hFE Rank : 200~400 only

* Note 1, 2) Pulse Tester : Pulse Width ≤300μs, Duty Cycle ≤2.0%

Electrical Characteristic Curves

Fig. 1 P_C – Ta

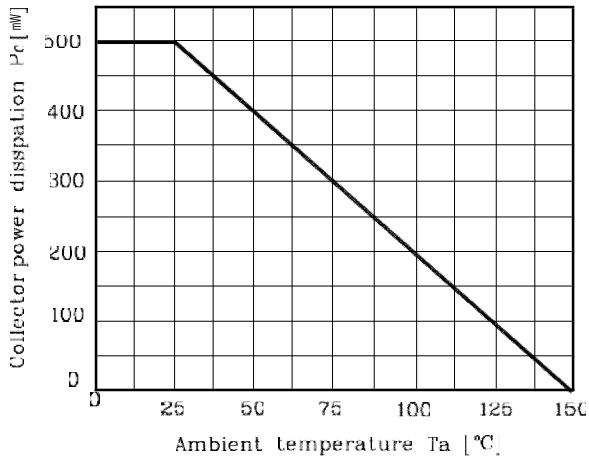


Fig. 2 h_{FE}-I_C

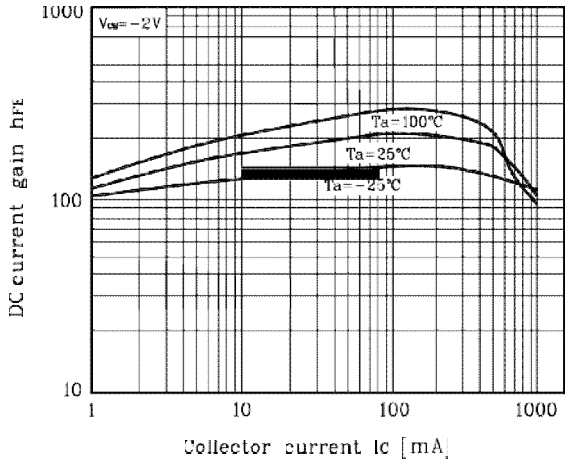


Fig. 3 V_{CE} - I_C

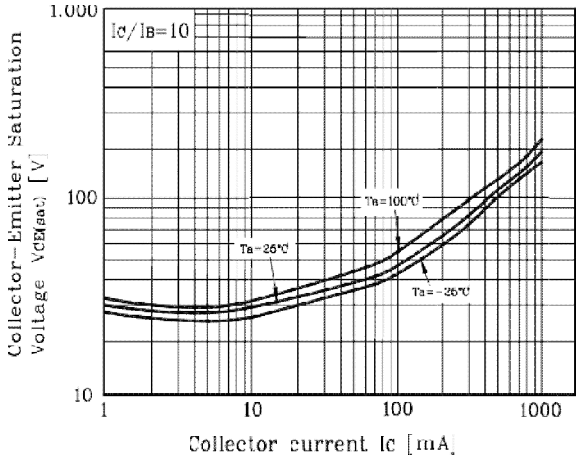


Fig. 4 $V_{BE(sat)}$ - I_C

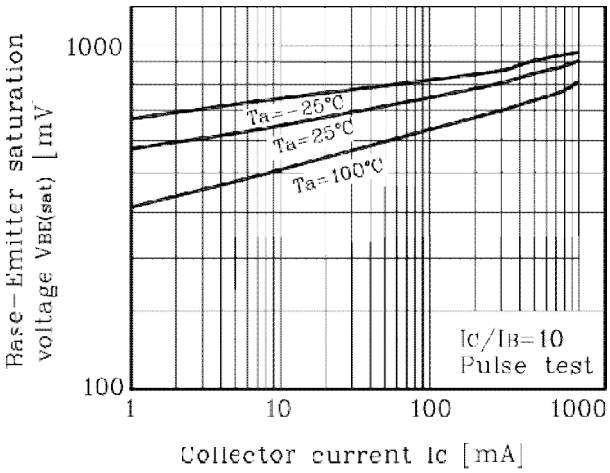


Fig. 5 $V_{BE(on)}$ - I_C

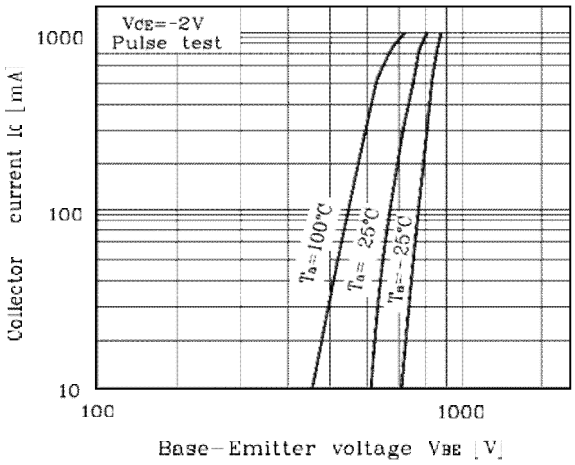
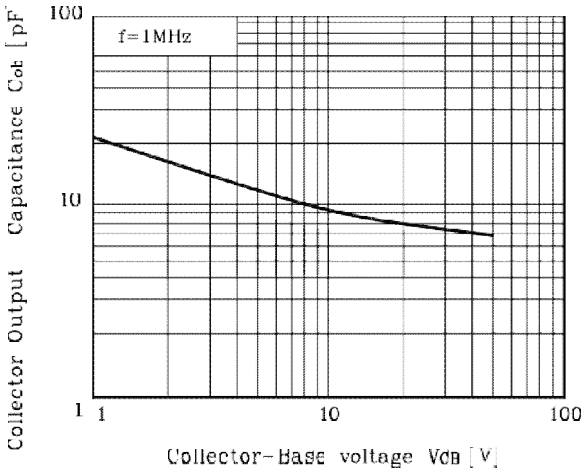


Fig. 6 Cob - V_{CB}



Electrical Characteristic Curves

Fig. 7 f_T - I_C

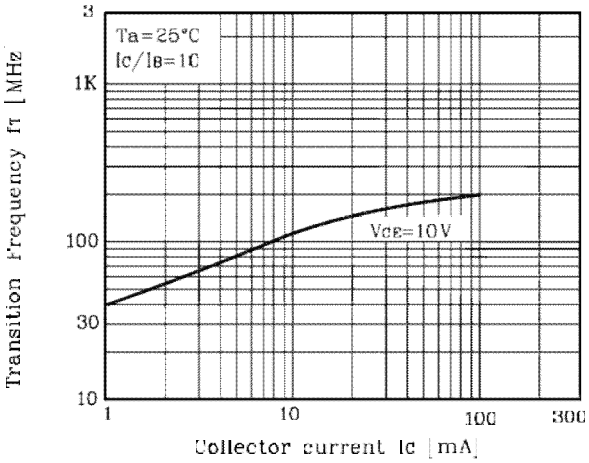
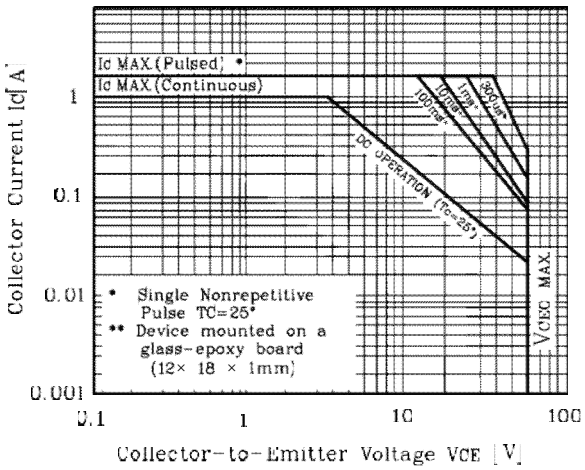
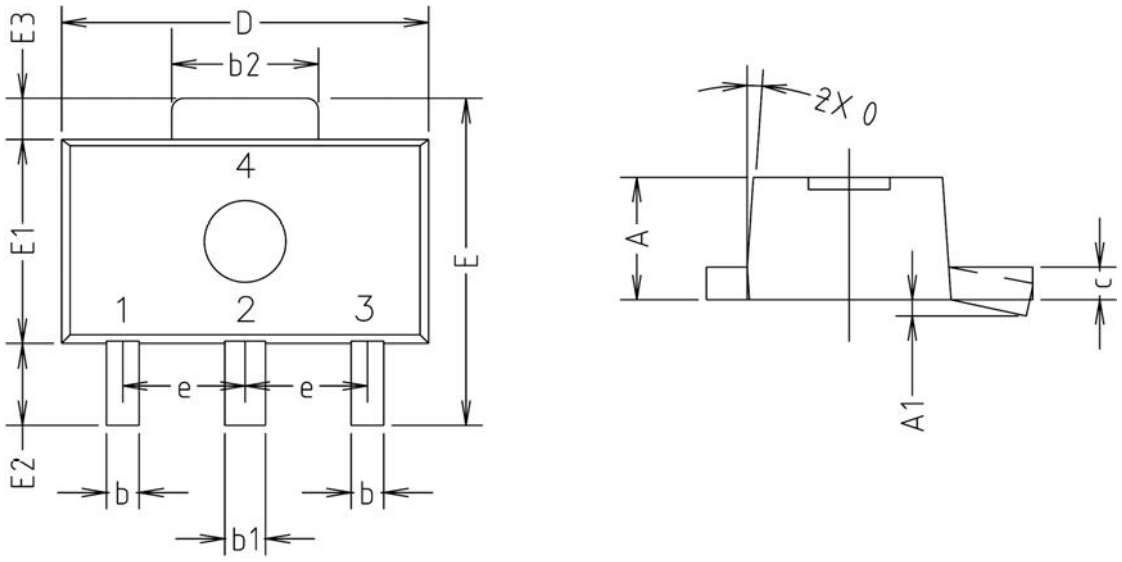


Fig. 8 Safe operating Area

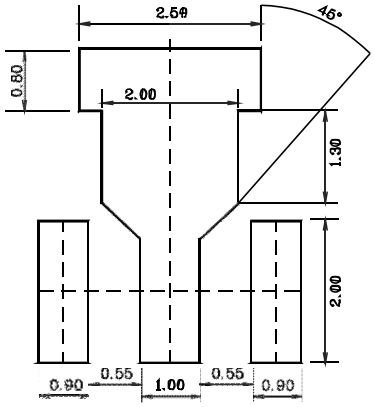


Outline Dimension(mm)



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]



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