

NPN Silicon Power Transistor

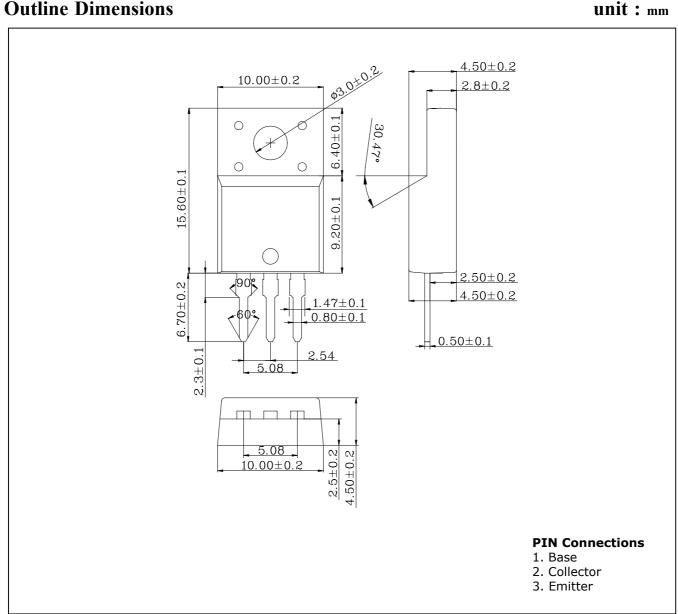
Features

- High speed switching
- High Collector Voltage : $V_{CBO} = 700V$
- Suitable for Switching Regulator and Motor Control

Ordering Information

Type NO.	Marking	Package Code		
STD13007FC	STD13007	TO-220F-3SL		

Outline Dimensions



KST-H028-000

Absolute maximum ratings

(Tc=25℃)

Characteristic	Symbol	Rating	Unit
Collector-Base voltage	V_{CBO}	700	V
Collector-Emitter voltage	V_{CEO}	400	V
Emitter-base voltage	V_{EBO}	9	V
Collector current (DC)	I_{C}	8	Α
Collector current (Pulse)	I_{CM}	16	А
Base current (DC)	I_{B}	4	Α
Collector Power dissipation (Tc=25℃)	P _C	40	W
Junction temperature	T _j	150	°C
Storage temperature	T_{stg}	-55~150	°C

Electrical Characteristics

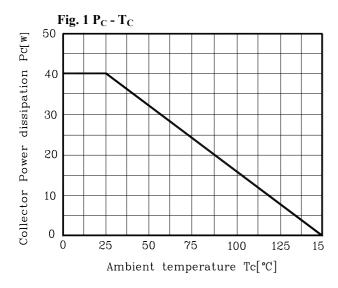
(Tc=25°C)

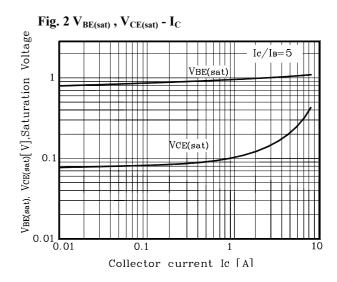
Characteristic	Symbol	Test Condition	Min.	Тур.	Max.	Unit
Collector-Emitter sustaining voltage	BV _{CEO(sus)}	$I_C=10$ mA, $I_B=0$	400	-	-	V
Emitter cut-off current	I_{EBO}	$V_{EB}=9V$, $I_{C}=0$	-	-	1	mA
DC Current gain	h _{FE} *	I _C =2A, V _{CE} =5V	8	-	60	
		I _C =5A, V _{CE} =5V	5	-	30	
Collector-Emitter saturation voltage	V _{CE(sat)} *	$I_C=2A$, $I_B=0.4A$	-	-	1	
		$I_C=5A$, $I_B=1A$	-	-	2	V
		$I_C=8A$, $I_B=2A$	-	-	3	
Base-Emitter saturation voltage	$V_{BE(sat)}^*$	I _C =2A, I _B =0.4A	-	-	1.2	V
		I _C =5A, I _B =1A	-	-	1.6	v
Transition frequency	f _T	V _{CE} =10V, I _C =0.5A, f=1MHz	-	14	-	MHz
Output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=0.1MHz	-	80	-	pF
Turn on Time	t _{on}		-	-	1.6	
Storage Time	t _{stg}	V_{CC} =125V, I_{C} =5A I_{B1} =- I_{B2} =1A	-	-	3	μs
Fall Time	t _f		-	-	0.7	

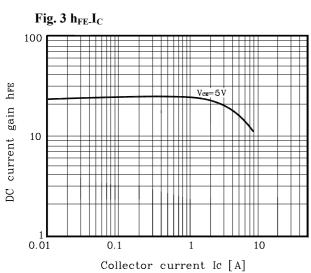
^{*} Pulse test: PW \leq 300 μ s, Duty cycle \leq 2%.

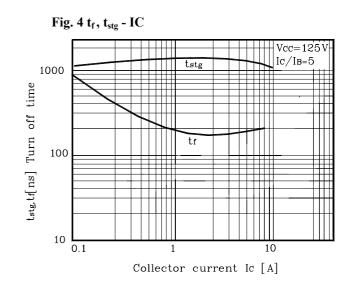
KST-H028-000 2

Electrical Characteristic Curves









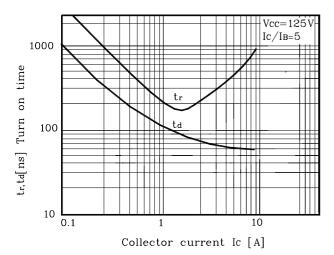
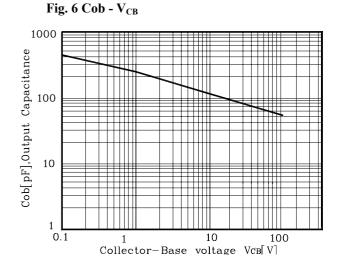
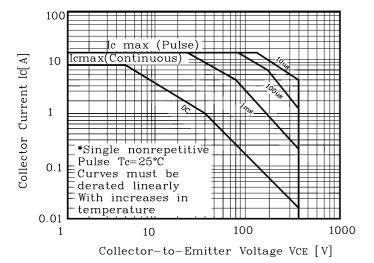


Fig. 5 td, tr-IC



KST-H028-000 3

Fig. 7 Safe Operating Area



These AUK products are intended for usage in general electronic equipments (Office and communication equipment, measuring equipment, domestic electrification, etc.).

Please make sure that you consult with us before you use these AUK 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, traffic signal, combustion central, all types of safety device, etc.).

AUK cannot accept liability to any damage which may occur in case these AUK products were used in the mentioned equipments without prior consurtation with AUK.

KST-H028-000 5