

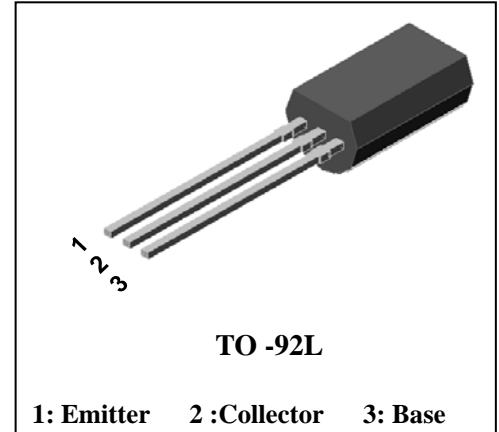
## Applications

- Power amplifier application
- High current switching application.

## Features

- Power Transistor General Purpose application
- Low saturation voltage :  $V_{CE(SAT)}=0.4V$  Typ.
- High Voltage :  $V_{CEO}=60V$  Min.

## PIN Connection



## Ordering Information

Type NO.	Marking	Package Code
STC403L	STC403	TO-92L

## Absolute maximum ratings

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	$I_C$	3	A(DC)
	* $I_{CP}$	6	A(Pulse)
Collector power dissipation	$P_C$	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	$R_{th(J-a)}$	-	125.0	°C/W

## Electrical Characteristics

Characteristic		Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Emitter breakdown voltage		$BV_{CEO}$	$I_C=50mA, I_B=0$	60	-	-	V
Collector cut-off current		$I_{CBO}$	$V_{CB}=60V, I_E=0$	-	-	50	$\mu A$
Emitter cut-off current		$I_{EBO}$	$V_{EB}=5V, I_C=0$	-	-	50	$\mu A$
DC current gain		$h_{FE}^*$	$V_{CE}=5V, I_C=0.5A$	200	-	400	-
Base-Emitter on voltage		$V_{BE(ON)}$	$V_{CE}=5V, I_C=0.5A$	-	0.7	1	V
Collector-Emitter saturation voltage		$V_{CE(sat)}$	$I_C=2A, I_B=0.2A$	-	0.4	1	V
Transition frequency		$f_T$	$V_{CB}=5V, I_C=0.5A$	-	30	-	MHZ
Collector output capacitance		$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	35	-	pF
Switching Time	Turn-on Time	$t_{on}$	<p> <math>I_{B1} = -I_{B2} = 0.2A</math>            DUTY CYCLE <math>\leq 1\%</math> </p>	-	0.65	-	$\mu S$
	Storage Time	$t_{stg}$		-	1.3	-	
	Fall Time	$t_f$		-	0.65	-	

\*  $h_{FE}$  rank : 200~400 Only

Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

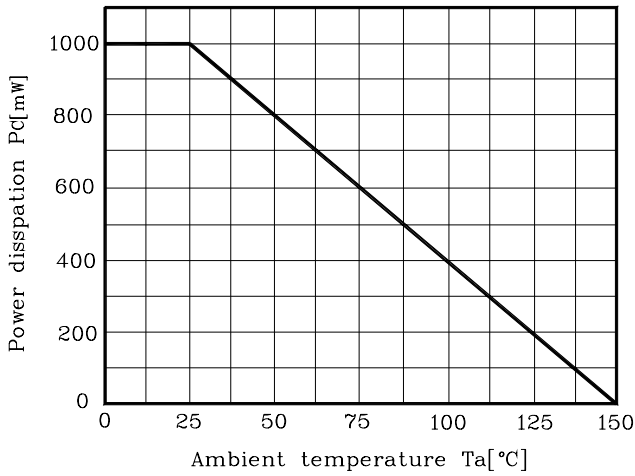


Fig. 2  $V_{CE} - I_C$

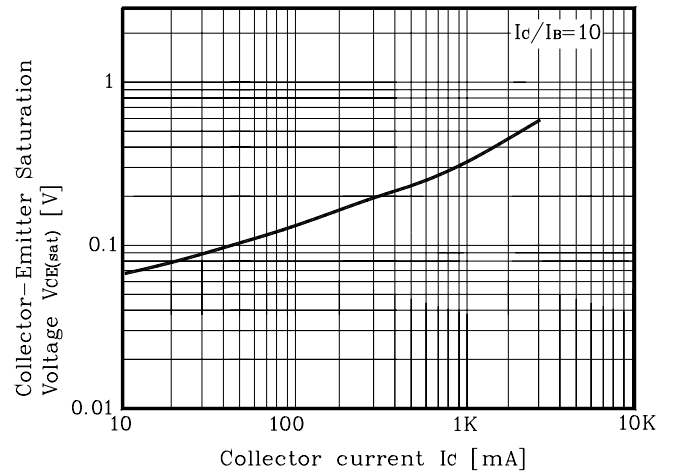


Fig. 3  $h_{FE} - I_C$

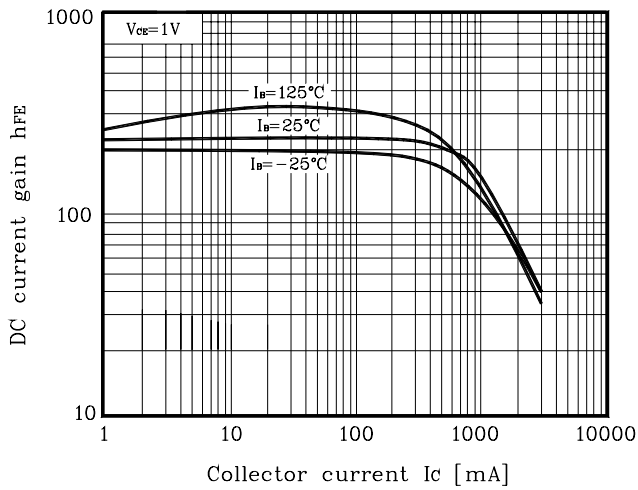


Fig. 4  $h_{FE} - I_C$

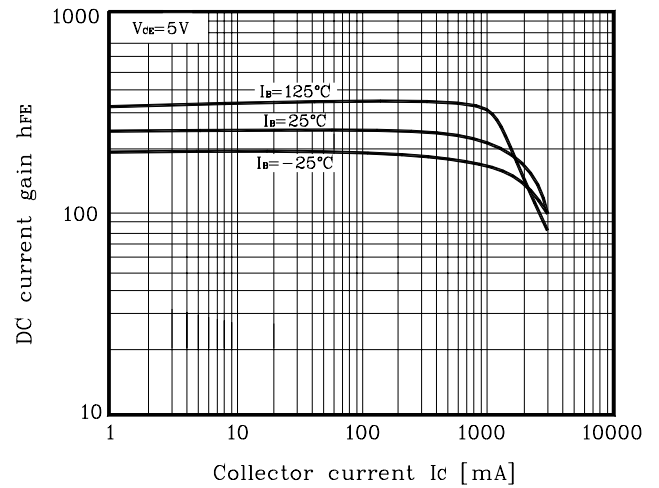


Fig. 5  $I_C - V_{CE}$

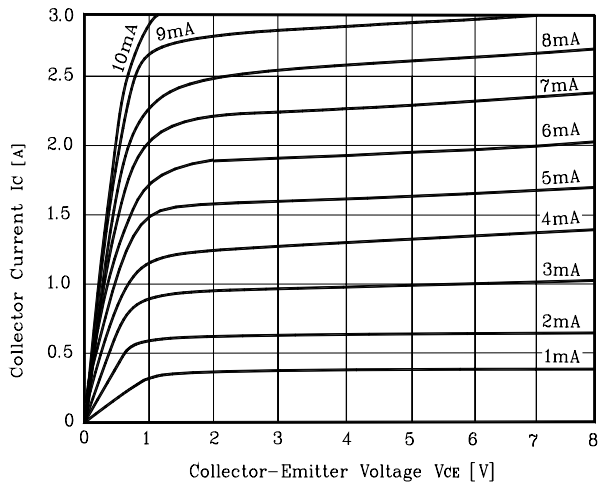
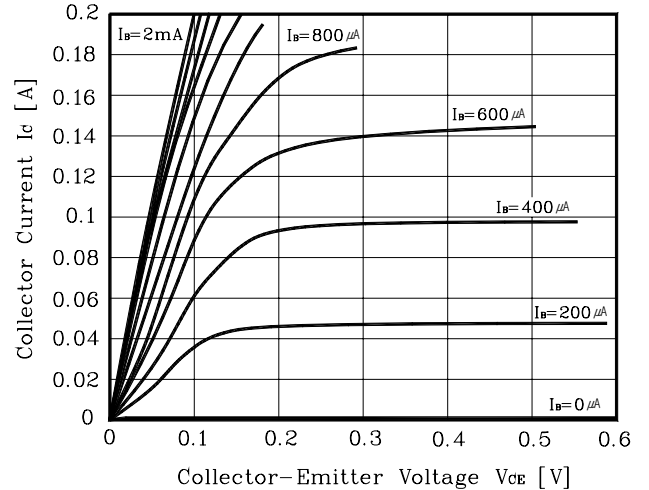
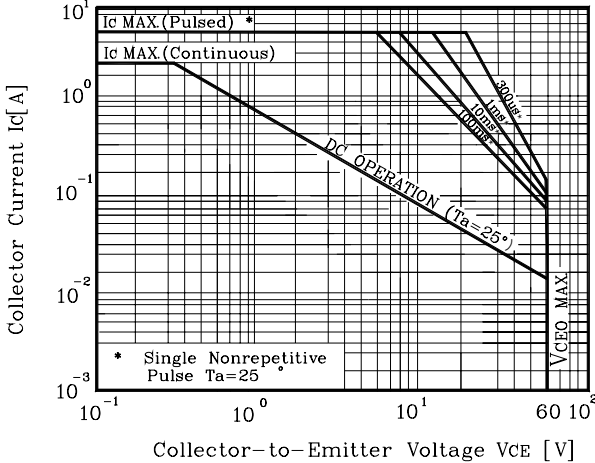


Fig. 6  $I_C - V_{CE}$

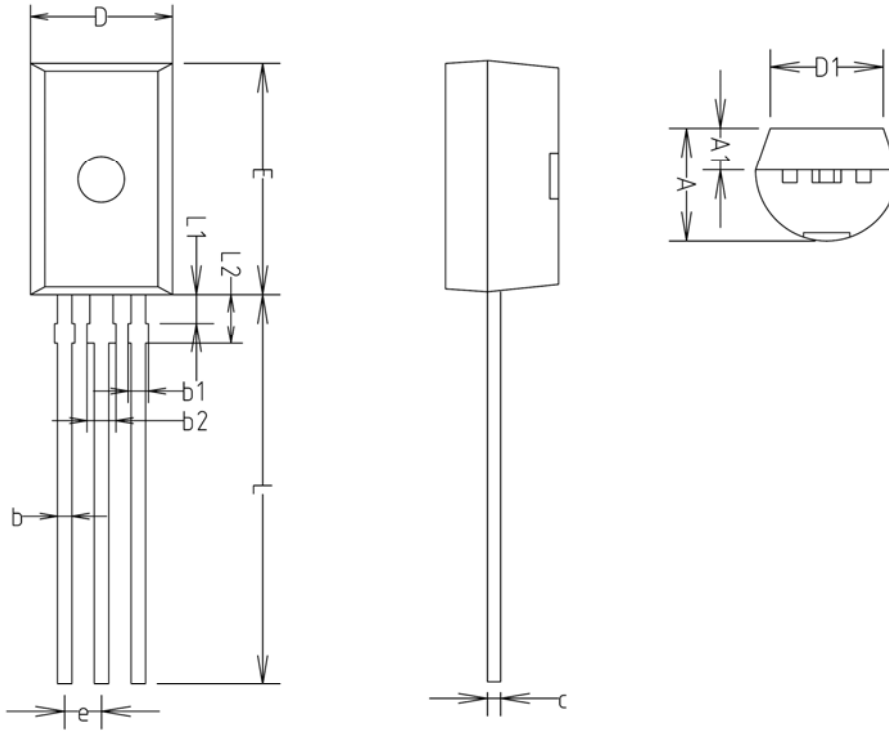


Electrical Characteristic Curves

Fig. 7 Safe operating Area



Outline Dimension



SYMBOL	MILLIMETERS(mm)			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	3.70	3.90	4.10	
A1	1.25	1.45	1.65	
b	0.40	0.50	0.60	
b1	—	—	0.70	
b2	—	—	1.00	
c	0.35	0.45	0.55	
D	4.70	4.90	5.10	
D1	3.70	3.90	4.10	
E	7.80	8.00	8.20	
e	1.27 TYP			
L	13.10	13.50	13.90	
L1	0.90	1.00	1.10	
L2	1.50	1.70	1.90	

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

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