KODENSHI AUK

STC403L

NPN Silicon Transistor

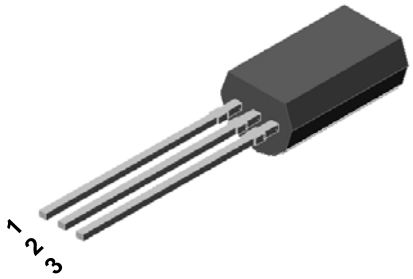
Applications

- 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



TO -92L

1: Emitter 2 :Collector 3: Base

Ordering Information

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

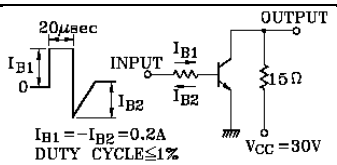
Absolute maximum ratings

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, tp= 300 μs

Characteristic	Symbol	Typ.	Max	Unit
Thermal resistance	$R_{th(J-a)}$	-	125.0	℃/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	μA
Emitter cut-off current		I_{EBO}	V_{EB}=5V, I_C=0	-	-	50	μA
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}		-	0.65	-	μS
	Storage Time	t_{stg}		-	1.3	-	
	Fall Time	t_f		-	0.65	-	

* hFE rank : 200~400 Only

Electrical Characteristic Curves

Fig. 1 P_C - Ta

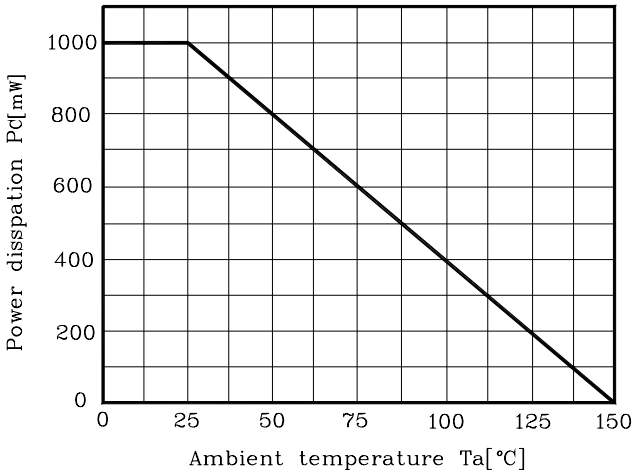


Fig. 2 V_{CE} - I_C

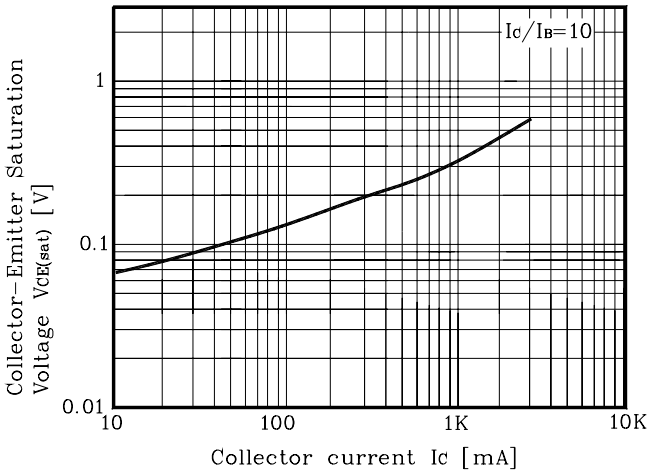


Fig. 3 h_{FE}-I_C

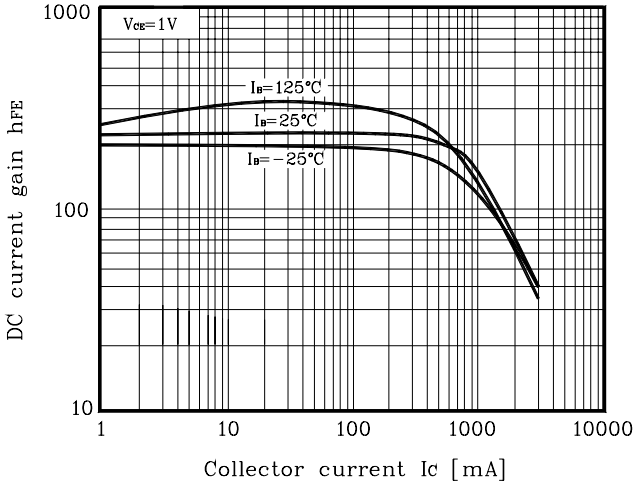


Fig. 4 h_{FE}-I_C

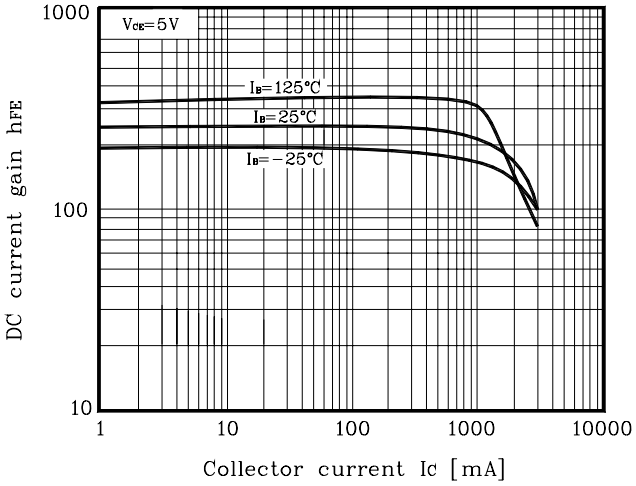


Fig. 5 I_C - V_{CE}

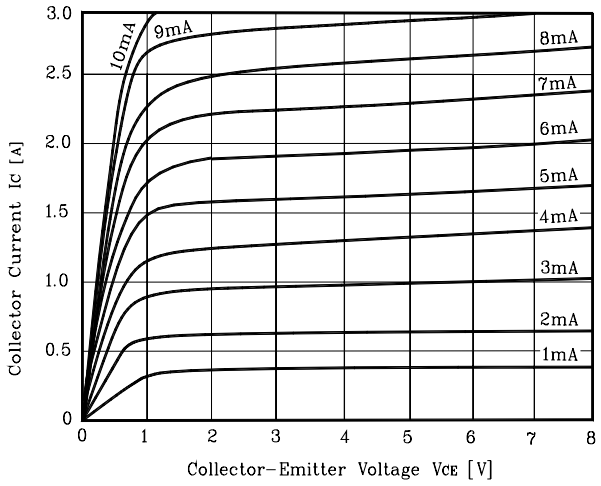
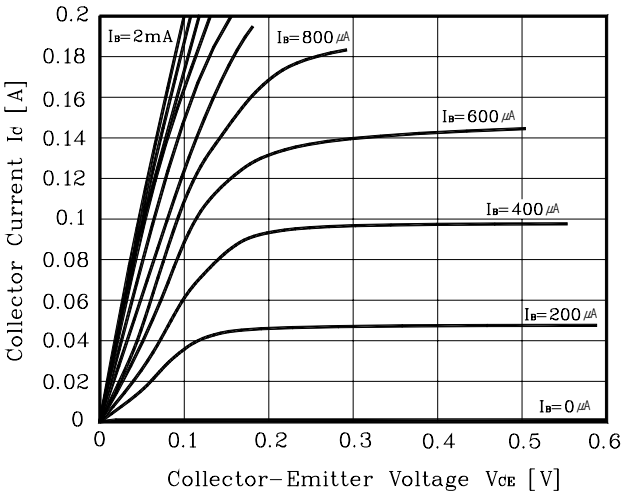
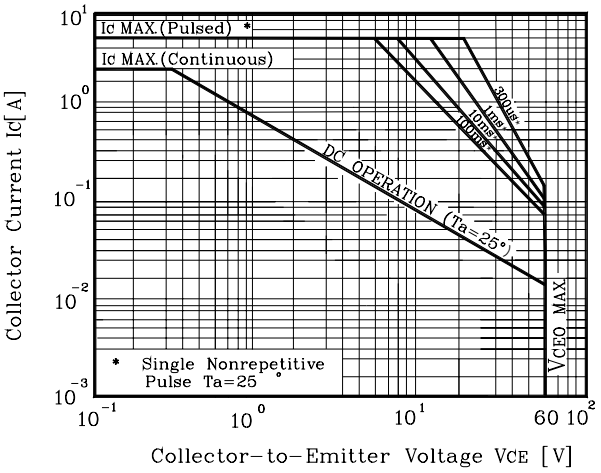


Fig. 6 I_C - V_{CE}

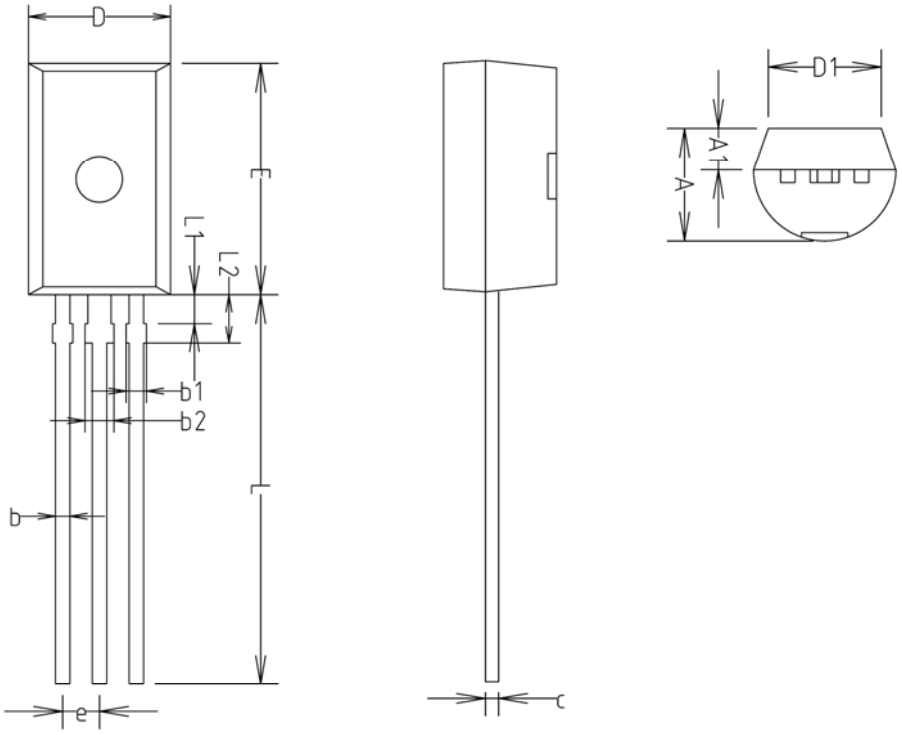


Electrical Characteristic Curves

Fig. 7 Safe operating Area



Outline Dimension



SYMBOL	MILLMETERS(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	

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