KODENSHI AUK

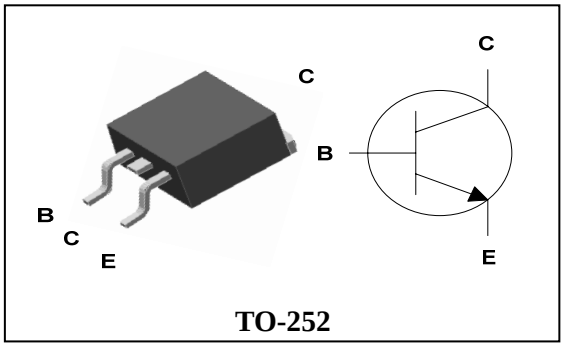
STC401D

NPN Silicon Transistor

Features

- Low saturation switching application
- Voltage regulator application
- Low saturation : $V_{CE(SAT)}$=0.4V Max.
- High Voltage : V_{CEO}=60V Min.

PIN Connection



TO-252

Ordering Information

Type NO.	Marking	Package Code
STC401D	STC401□	TO-252

□ : Year & Week Code

Absolute maximum ratings

Characteristic	Symbol	Ratings	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 dissipation	P_C(Ta= 25°C)	1	W
	P_C(T_C= 25°C)	10	
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55~150	°C

* : Single pulse, tp= 300 μs

Electrical Characteristics

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	I_C=100 ㎂, 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=10mA, 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} *	V_{CE}=2V, I_C=100mA	200	-	400	-
		V_{CE}=2V, I_C=1A	80	-	-	
Base-Emitter on voltage	$V_{BE(ON)}$	V_{CE}=2V, I_C=500mA	-	-	1.2	V
Collector-Emitter saturation voltage	$V_{CE(sat)}$	I_C=500mA, I_B=50mA	-	-	0.4	V
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	10	-	pF
Transition frequency	f_T	V_{CB}=10V, I_C=50mA	-	160	-	MHz

* h_{FE} rank : 200~400 Only

Electrical Characteristic Curves

Fig. 1 P_C - Ta

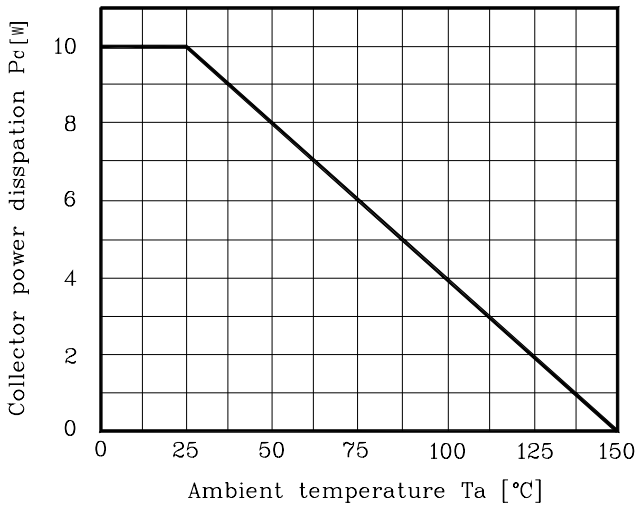


Fig. 2 V_{CE} - I_C

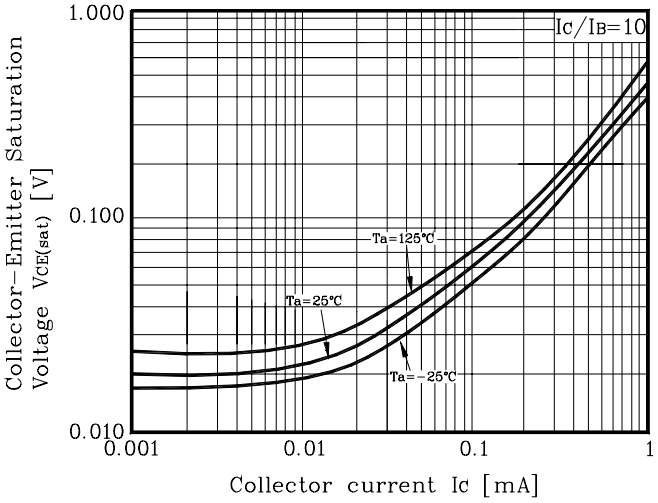


Fig. 3 h_{FE}-I_C

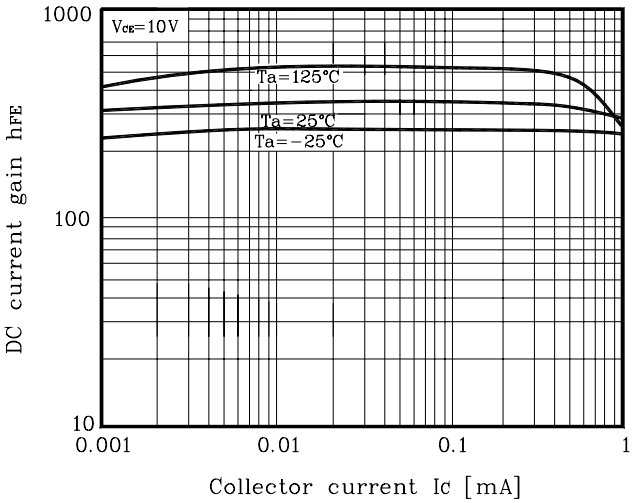


Fig. 4 h_{FE}-I_C

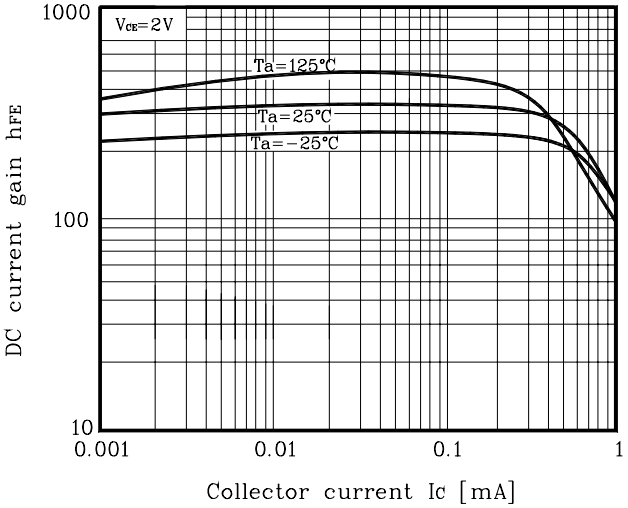


Fig. 5 h_{FE}-I_C

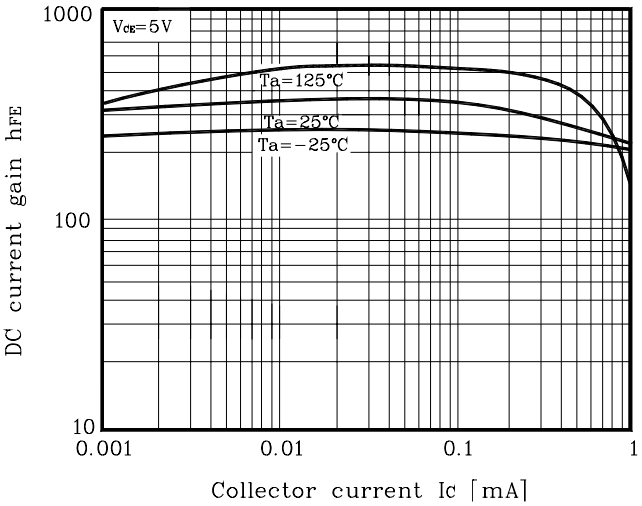
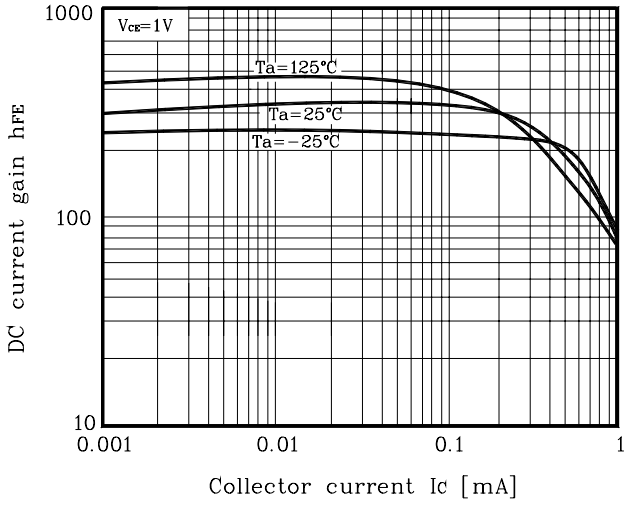


Fig. 6 h_{FE}-I_C



Electrical Characteristic Curves

Fig. 7 Cob - V_{CB}

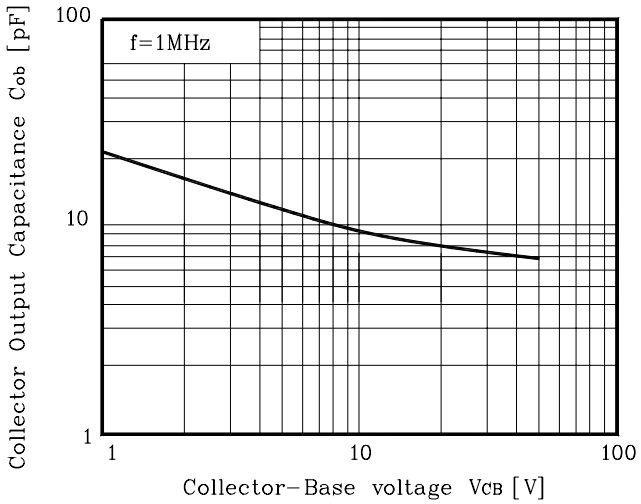


Fig. 8 I_C - V_{CE}

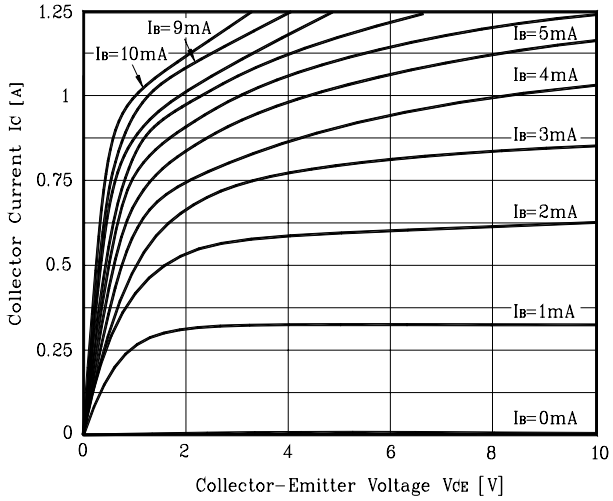


Fig. 9 f_T - I_C

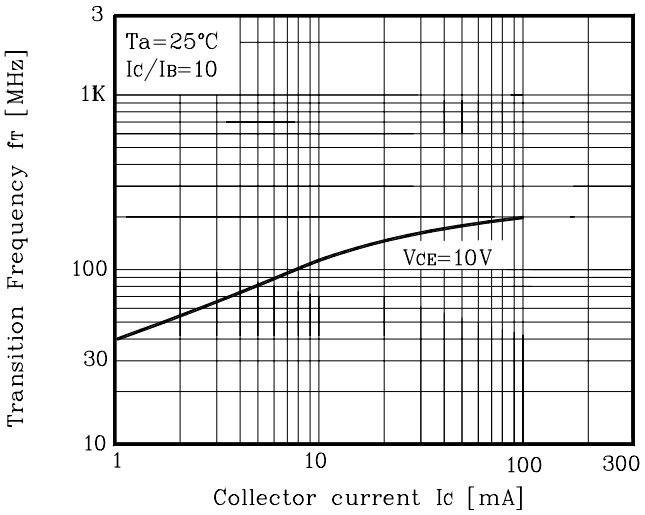
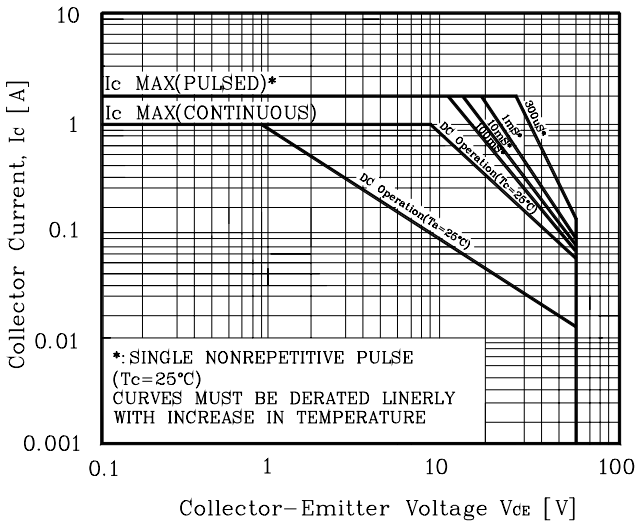
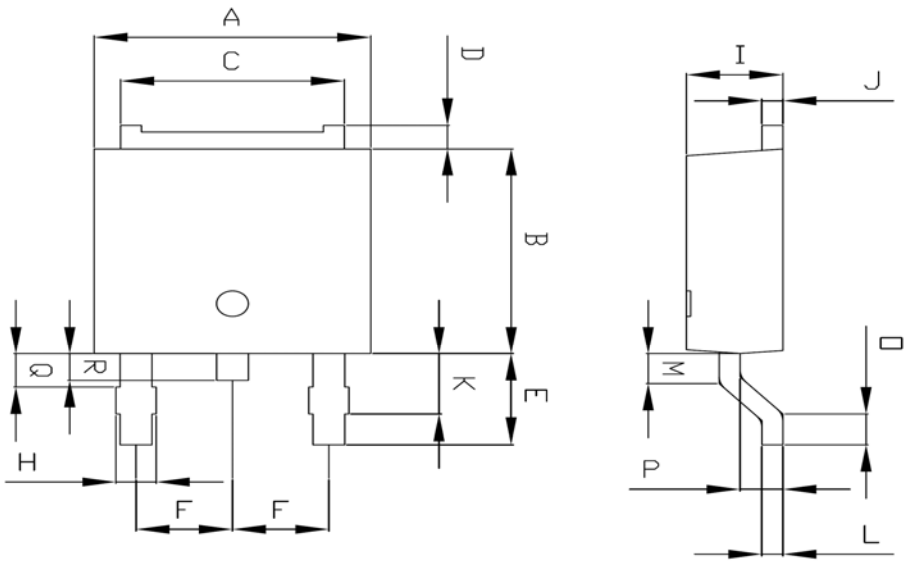


Fig. 10 Safe operating Area

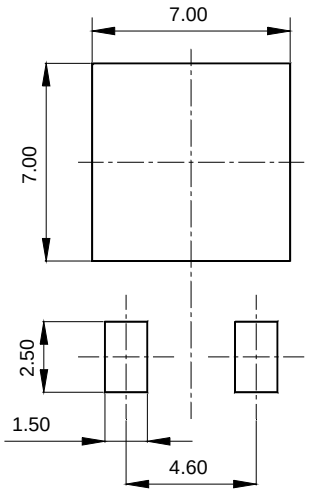


Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	6.40	6.60	6.80	
B	5.90	6.10	6.30	
C	5.04	5.34	5.64	
D	0.50	0.70	0.90	
E	2.50	2.70	2.90	
F	2.10	2.30	2.50	
H	0.96 MAX			
I	2.20	2.30	2.40	
J	0.40	0.50	0.60	
K	1.60	1.80	2.00	
L	0.40	0.50	0.60	
M	0.81	0.91	1.01	
O	0.80	0.90	1.00	
P	0.90	1.00	1.10	
Q	0.95 MAX			
R	0.60	0.80	1.00	

※Recommend PCB solder land [Unit: mm]



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