KODENSHI AUK

STC945

NPN Silicon Transistor

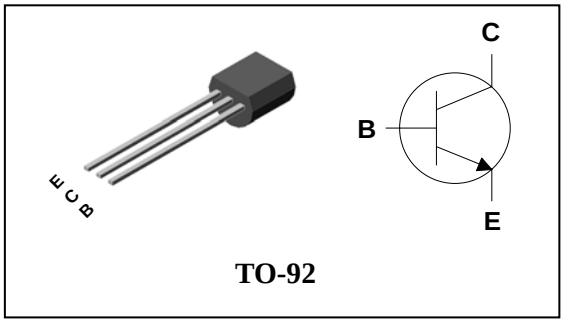
Description

- General small signal amplifier

Features

- Low collector saturation voltage
  : $V_{CE(sat)}$=0.25V(Max.)
- Low output capacitance : C_{ob}=2pF(Typ.)
- Complementary pair with STA733

PIN Connection



TO-92

Ordering Information

Type NO.	Marking	Package Code
STC945	STC945	TO-92

Absolute maximum ratings (Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	50	V
Collector-Emitter voltage	V_{CEO}	40	V
Emitter-Base voltage	V_{EBO}	5	V
Collector current	I_C	150	mA
Collector dissipation	P_C	500	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55~150	°C

Electrical Characteristics (Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	I_C=50μA, I_E=0	50	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	I_C=1mA, I_B=0	40	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	I_E=50μA, I_C=0	5	-	-	V
Collector cut-off current	I_{CBO}	V_{CB}=50V, 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}=6V, I_C=2mA	70	-	700	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	I_C=100mA, I_B=10mA	-	-	0.25	V
Transistion frequency	f_T	V_{CE}=10V, I_C=1mA	80	-	-	MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	2	3.5	pF
Noise figure	NF	V_{CE}=6V, I_C=0.1mA, f=1KHz, Rg=10KΩ	-	-	10	dB

* : h_{FE} rank / O : 70 ~ 140, Y : 120 ~ 240, G : 200 ~ 400, L : 300 ~ 700

Electrical Characteristic Curves

Fig. 1 P_C –T_a

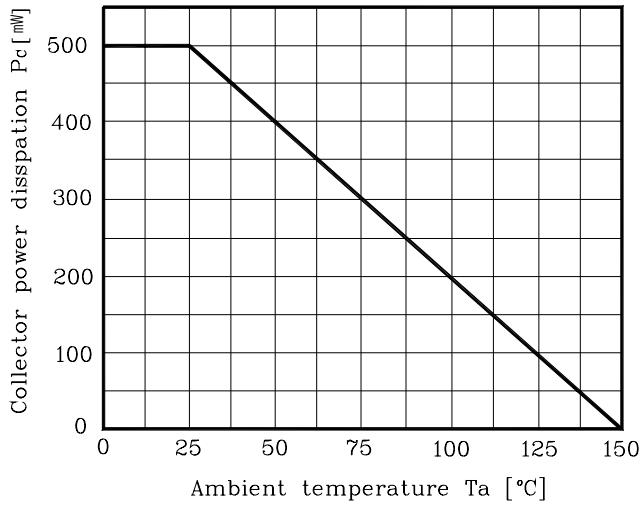


Fig. 2 I_C -V_{BE}

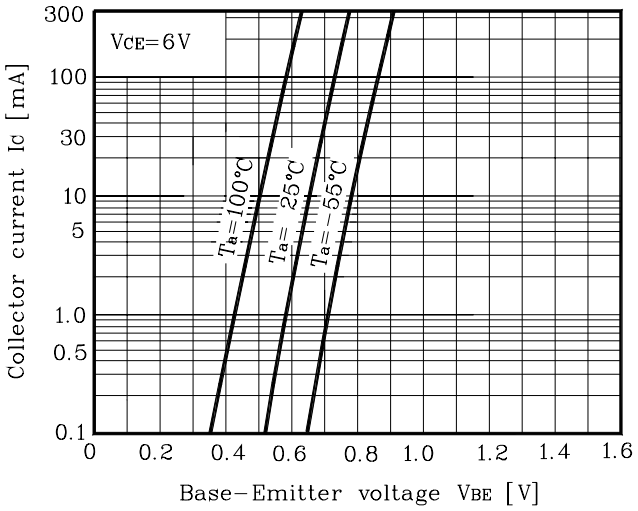


Fig. 3 I_C -V_{CE}

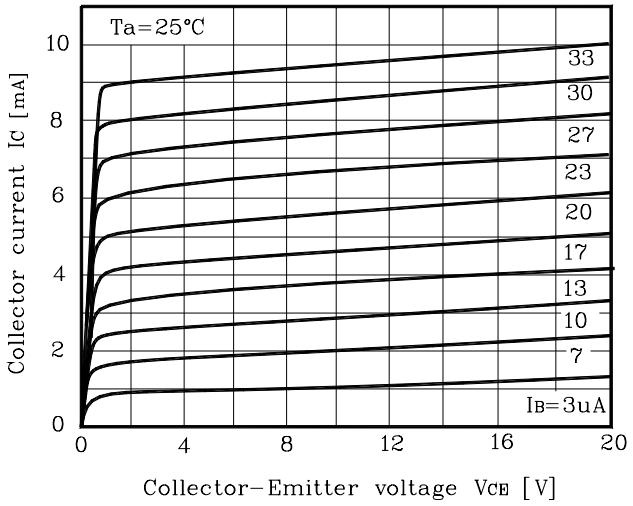


Fig. 4 h_{FE} -I_C

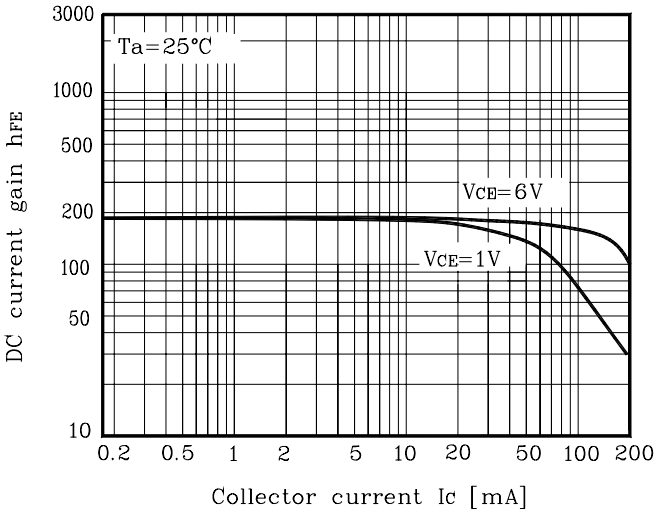
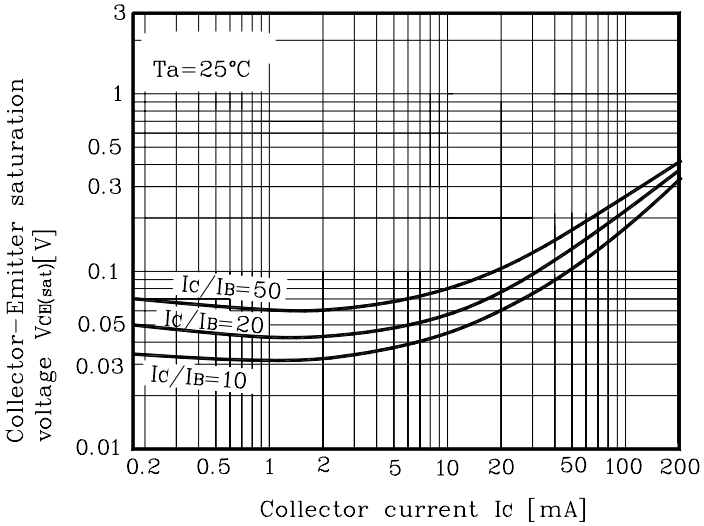
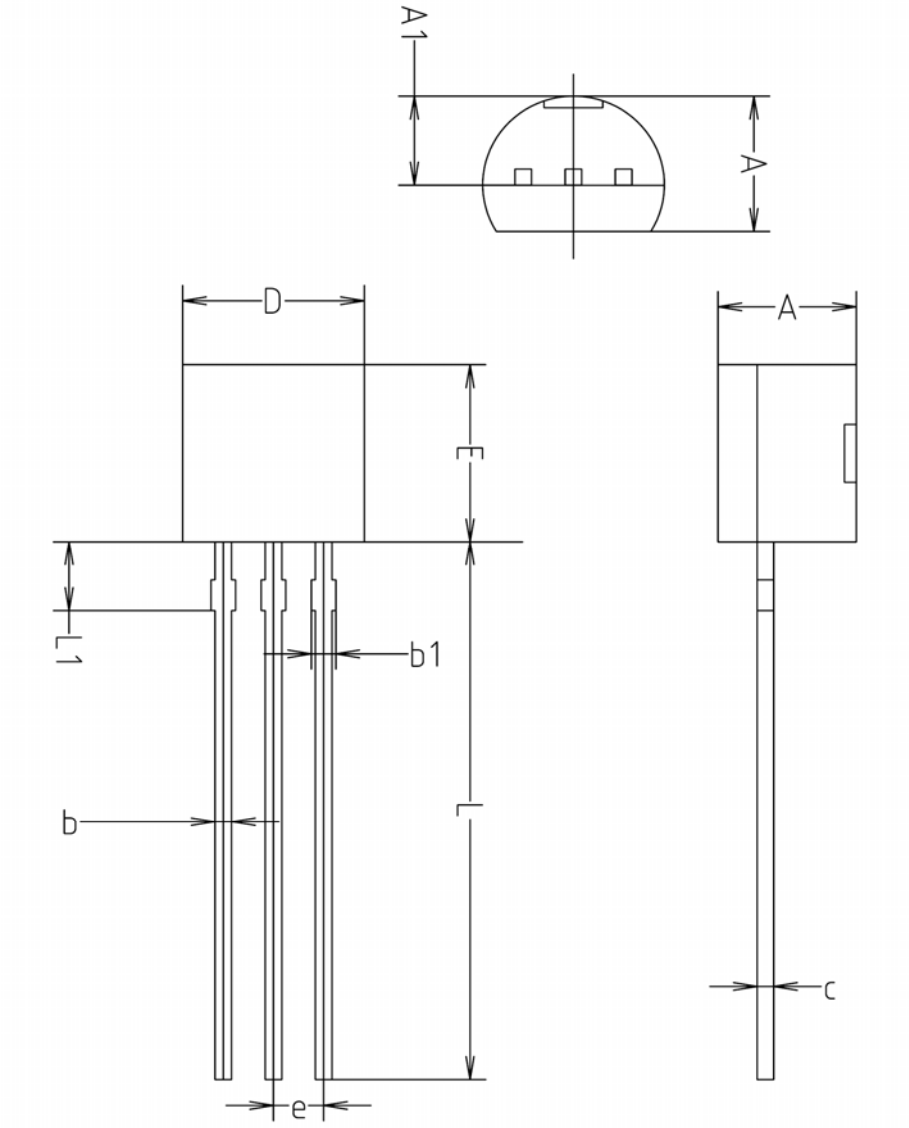


Fig. 5 $V_{CE(sat)}$ -I_C



Outline Dimension



SYMBOL	MILLMETERS(mm)		
	MINIMUM	NOMINAL	MAXIMUM
A	3.40	3.50	3.66
A1	2.46	2.51	2.59
b	0.39	0.44	0.53
b1	0.39	–	0.63
c	0.35	0.42	0.47
D	4.48	4.60	4.70
E	4.48	4.60	4.70
e	1.17	1.27	1.37
L	13.70	14.00	14.77
L1	1.55	1.70	2.15

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