

Description

- General small signal amplifier

Features

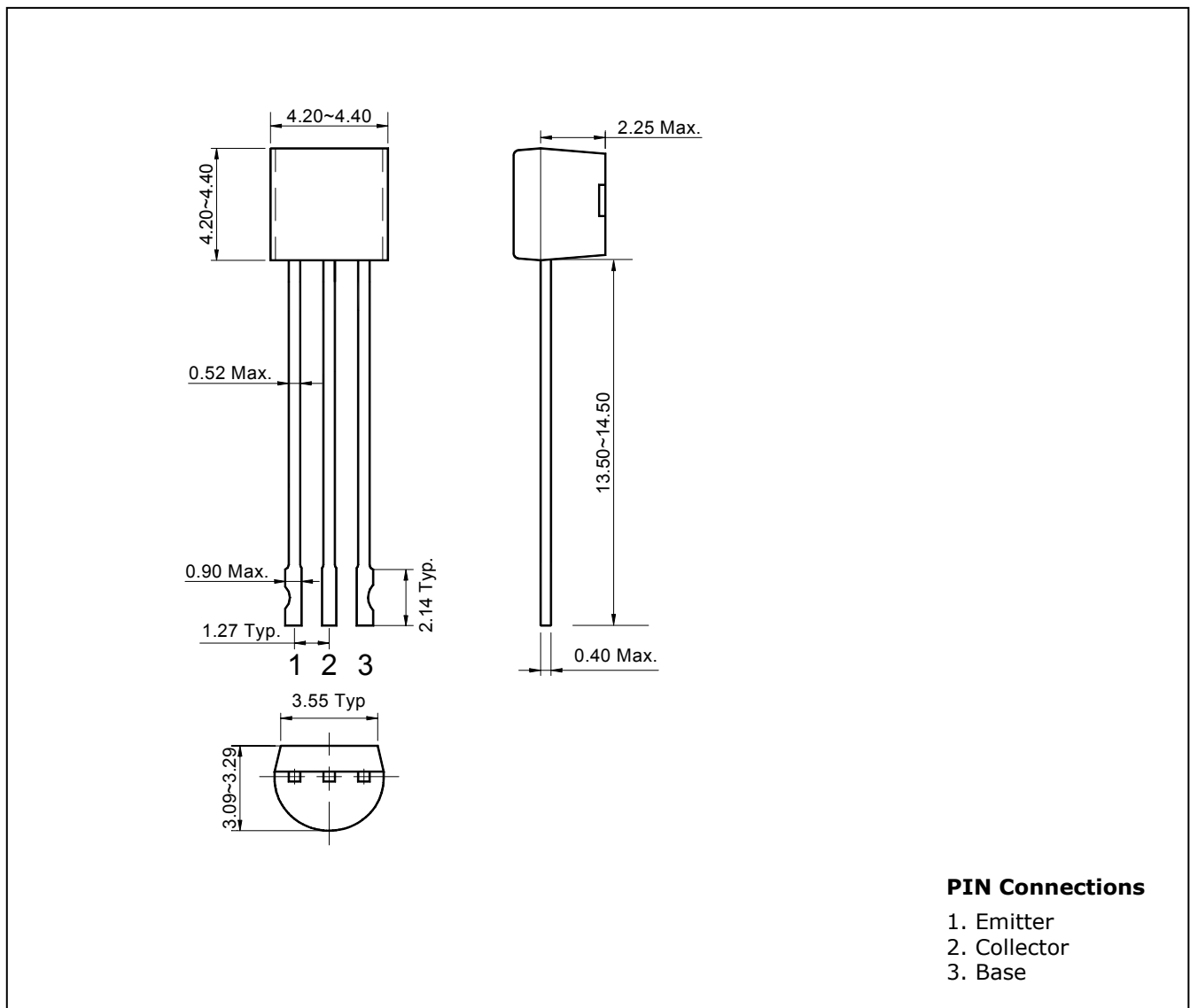
- Low collector saturation voltage : $V_{CE(sat)}=0.25V(\text{Max.})$
- Low output capacitance : $C_{ob}=2pF(\text{Typ.})$
- Complementary pair with STA733N

Ordering Information

Type NO.	Marking	Package Code
STC945N	STC945	TO-92N

Outline Dimensions

unit : mm



PIN Connections

1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings

(Ta=25°C)

Characteristic	Symbol	Rating	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 power dissipation	P_C	400	mW
Junction temperature	T_J	150	°C
Storage temperature range	T_{stg}	-55~150	°C

Electrical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-emitter breakdown voltage	BV_{CEO}	$I_C=1mA, I_B=0$	40	-	-	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
Base-emitter voltage	V_{BE}	$V_{CE}=6V, I_C=2mA$	-	0.67	0.9	V
Transition frequency	f_T	$V_{CE}=10V, I_C=10mA$	-	200	-	MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$	-	2	-	pF

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

Electrical Characteristic Curves

Fig. 1 $P_C - T_a$

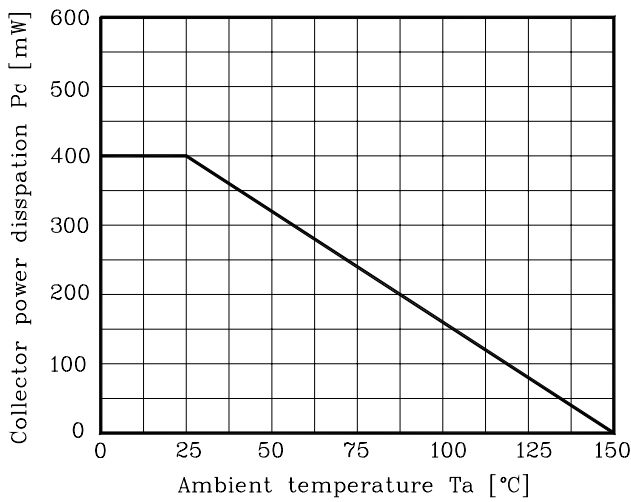


Fig. 2 $I_C - V_{BE}$

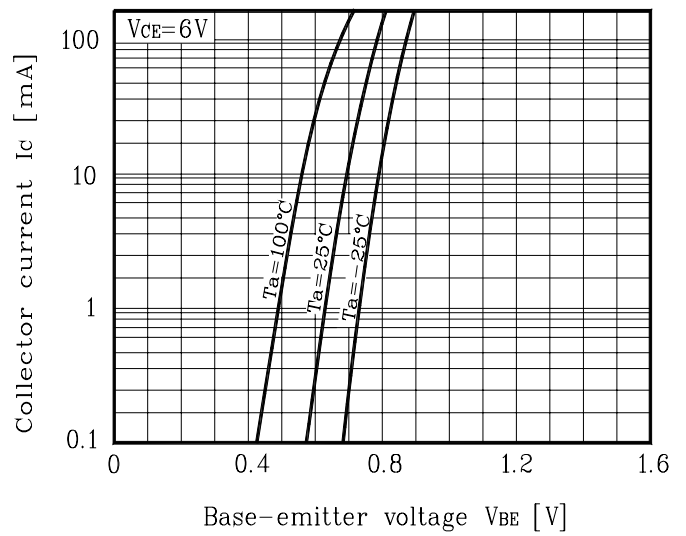


Fig. 3 $I_C - V_{CE}$

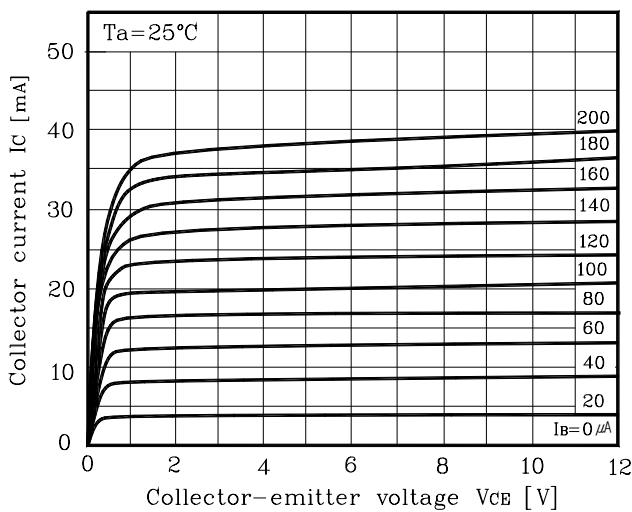


Fig. 4 $h_{FE} - I_C$

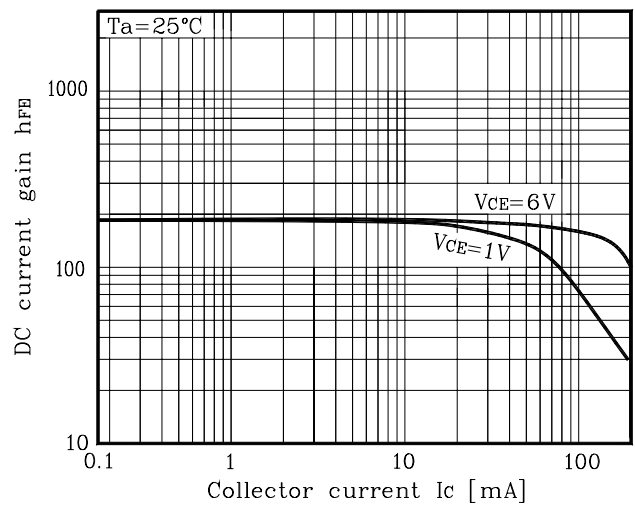


Fig. 5 $V_{CE(sat)} - I_C$

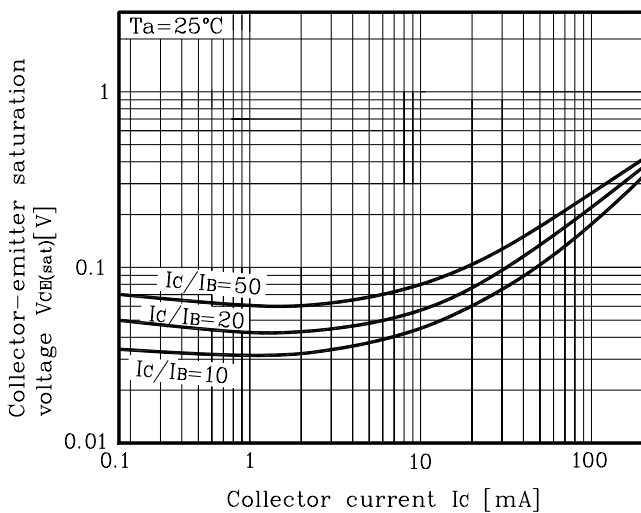
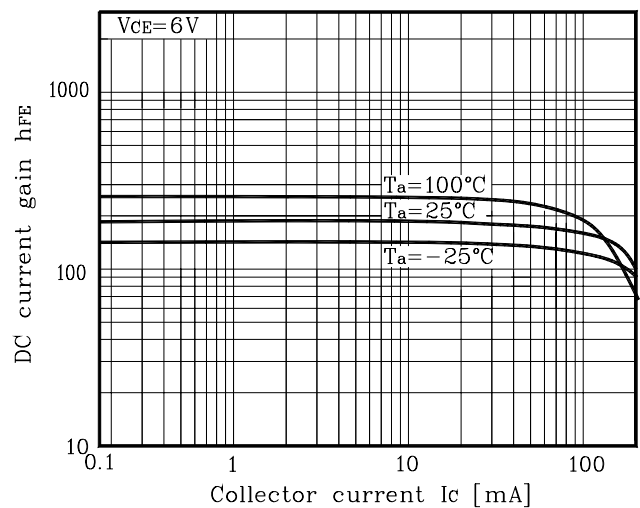


Fig. 6 $h_{FE} - I_C$



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