

## Description

- General small signal amplifier

## Features

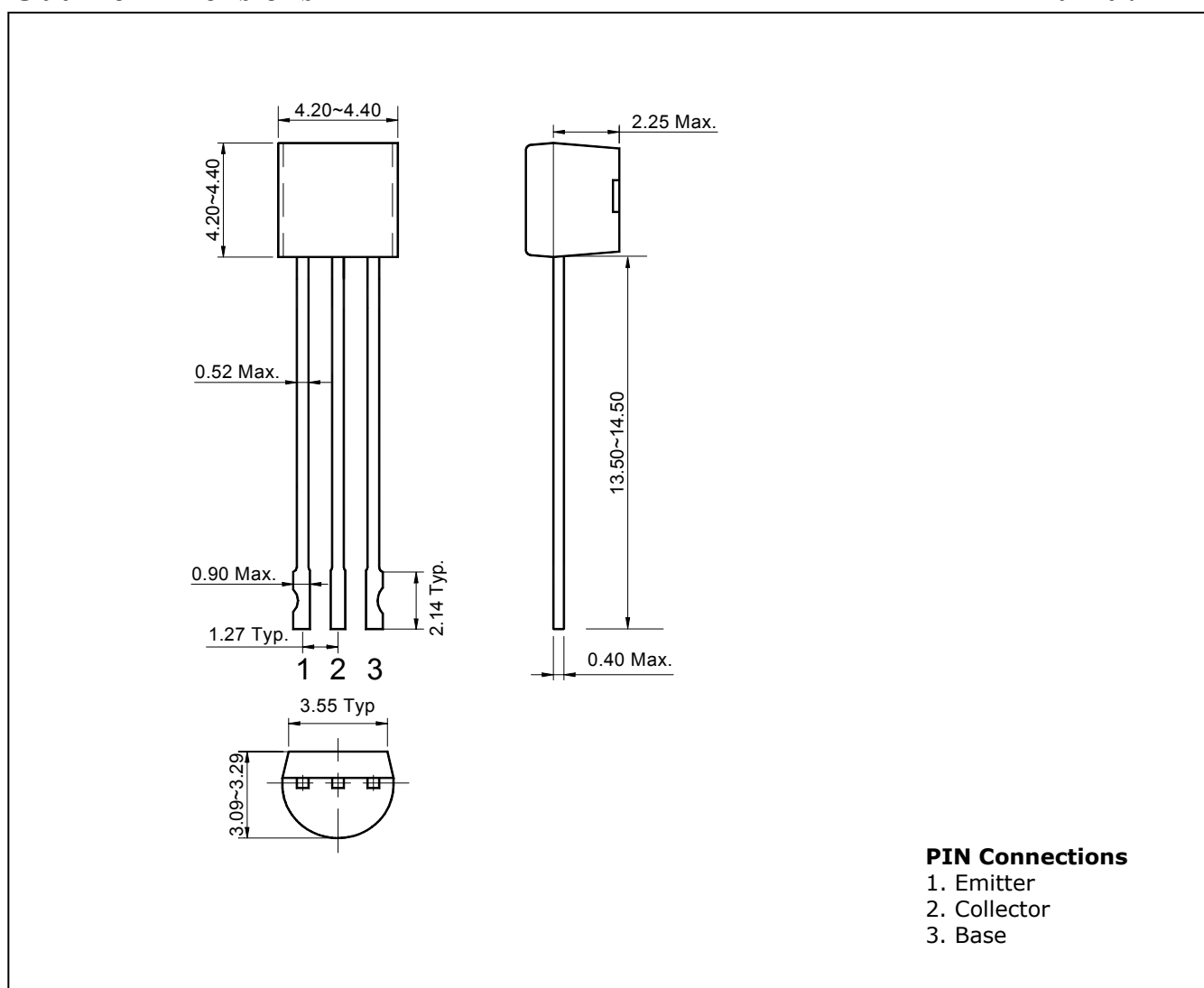
- Low collector saturation voltage :  $V_{CE(sat)} = -0.3V(\text{Max.})$
- Low output capacitance :  $C_{ob} = 4pF(\text{Typ.})$
- Complementary pair with STC945N

## Ordering Information

Type NO.	Marking	Package Code
STA733N	STA733	TO-92N

## Outline Dimensions

unit : mm



**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	$BV_{CEO}$	$I_C = -1\text{mA}$ , $I_B = 0$	-40	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -50\text{V}$ , $I_E = 0$	-	-	-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5\text{V}$ , $I_C = 0$	-	-	-0.1	$\mu\text{A}$
DC current gain	$h_{FE}^*$	$V_{CE} = -6\text{V}$ , $I_C = -2\text{mA}$	70	-	700	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}$ , $I_B = -10\text{mA}$	-	-	-0.3	V
Base-emitter voltage	$V_{BE}$	$V_{CE} = -6\text{V}$ , $I_C = -2\text{mA}$	-	-0.67	-0.9	V
Transition frequency	$f_T$	$V_{CE} = -10\text{V}$ , $I_C = -10\text{mA}$	-	200	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$	-	4	-	pF

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

## Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

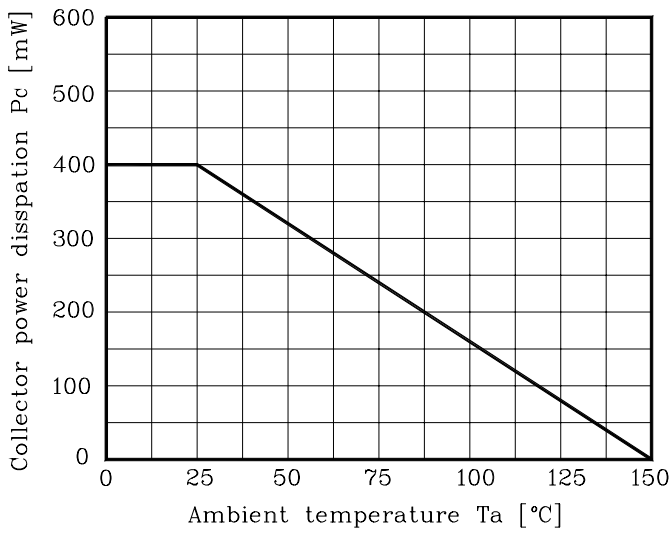


Fig. 2  $I_C - V_{BE}$

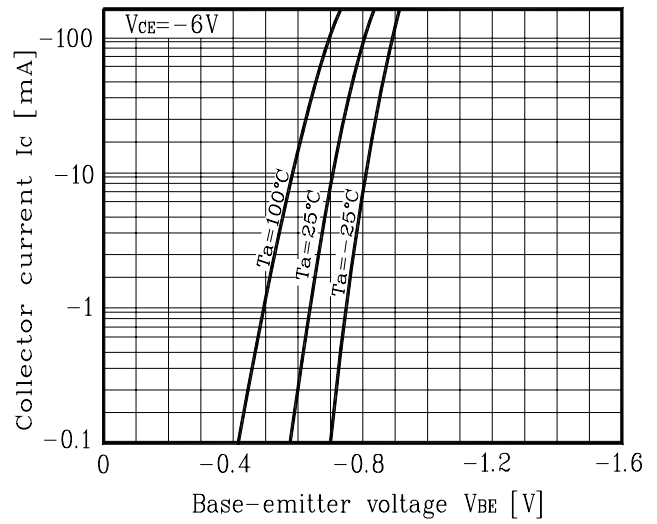


Fig. 3  $I_C - V_{CE}$

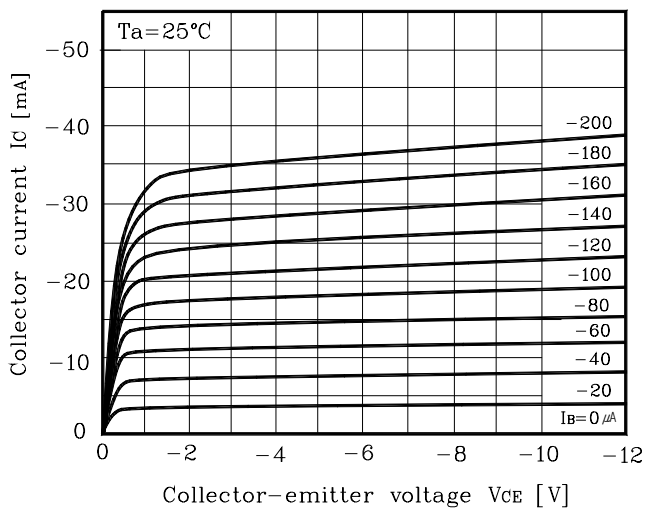


Fig. 4  $h_{FE} - I_C$

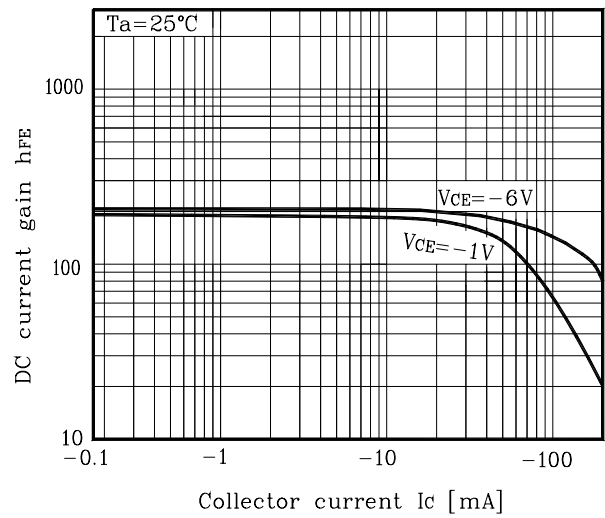


Fig. 5  $V_{CE(sat)} - I_C$

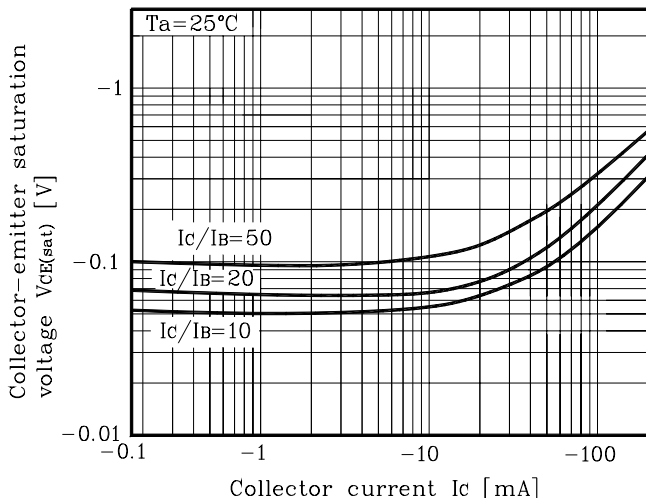
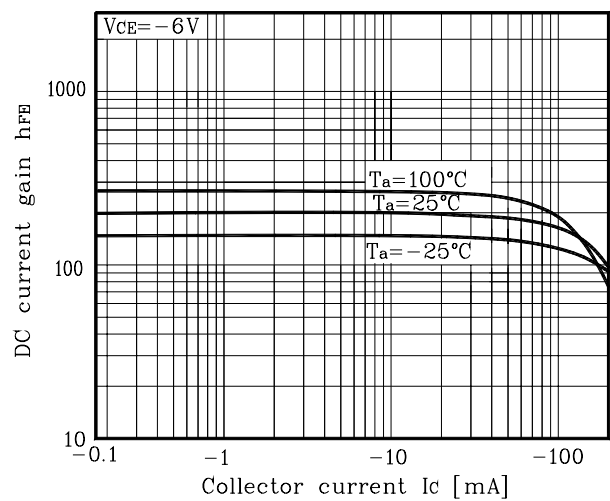


Fig. 6  $h_{FE} - I_C$



**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.**