

**Description**

- General small signal amplifier

**Features**

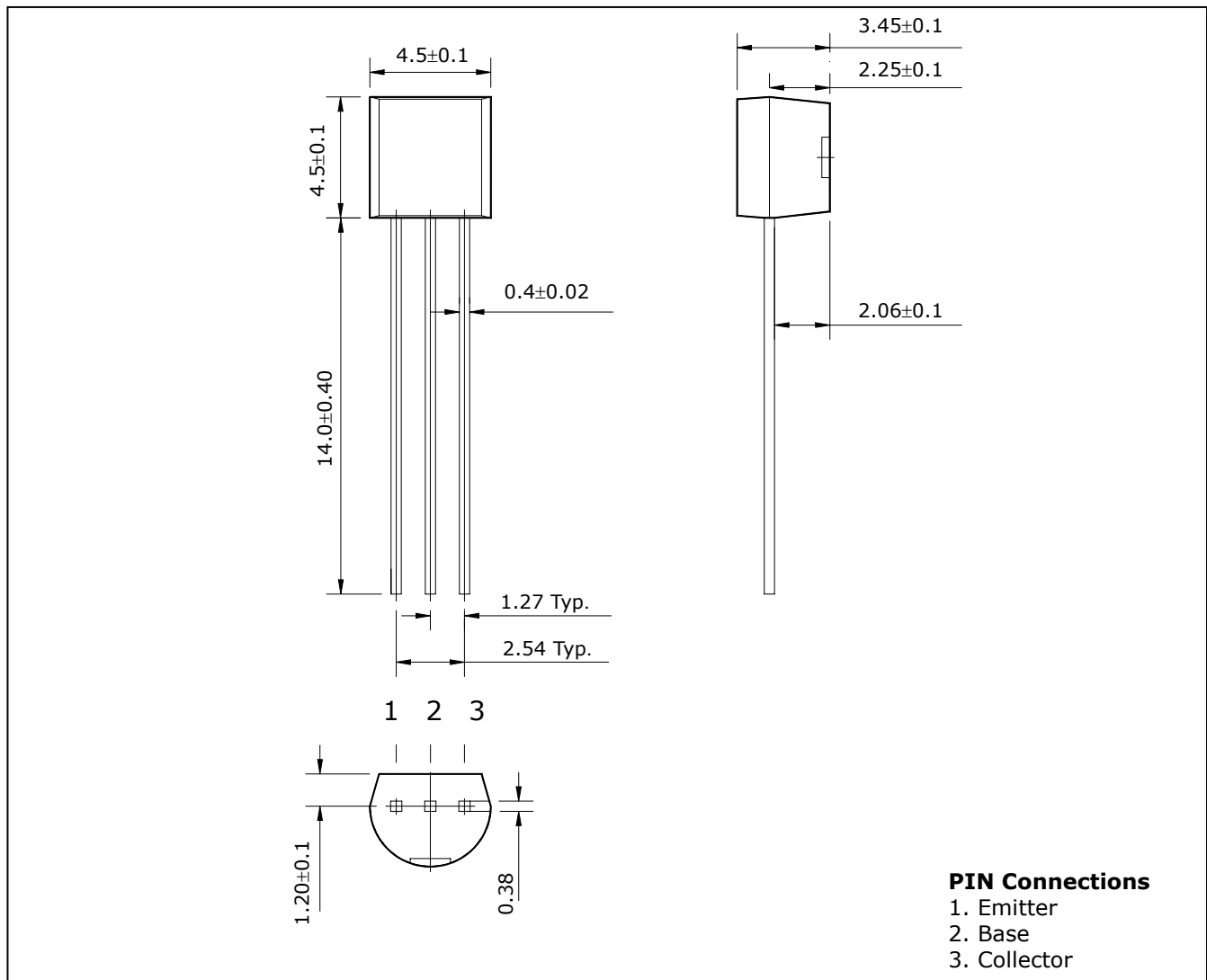
- Low collector saturation voltage :  $V_{CE(sat)} = -0.3V$  [ $I_C = -20mA$ ,  $I_B = -2mA$ ]
- Low output capacitance :  $C_{ob} = 2.8pF$  (Typ.)
- Complementary pair with STS5343

**Ordering Information**

Type NO.	Marking	Package Code
STS733	STS733	TO-92

**Outline Dimensions**

unit : mm



## Absolute maximum ratings

(Ta = 25 °C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	$V_{CBO}$	-60	V
Collector-Emitter voltage	$V_{CEO}$	-50	V
Emitter-base	$V_{EBO}$	-5	V
Collector current	$I_C$	-150	mA
Collector dissipation	$P_C$	625	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	$BV_{CBO}$	$I_C = -100\mu A, I_B = 0$	-60	-	-	V
Collector-Emitter breakdown voltage	$BV_{CEO}$	$I_C = -1mA, I_B = 0$	-50	-	-	V
Emitter-Base breakdown voltage	$BV_{EBO}$	$I_C = -10\mu A, I_B = 0$	-5	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -25V, I_E = 0$	-	-	-100	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -3V, I_C = 0$	-	-	-100	nA
DC current gain	$h_{FE1}$	$V_{CE} = -6V, I_C = -1mA$	120	-	240	-
DC current gain	$h_{FE2}$	$V_{CE} = -2.5V, I_C = -100mA$	60	-	-	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C = -20mA, I_B = -2mA$	-	-0.18	-0.3	V
Base-Emitter on Voltage	$V_{BE(on)}$	$V_{CE} = -6V, I_C = -1mA$	-0.5	-0.62	-0.8	V
Transition frequency	$f_T$	$V_{CE} = -6V, I_C = -10mA$	50	180	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$	-	2.8	-	pF
Noise figure	NF	$V_{CE} = -6V, I_C = -0.3mA, f = 1KHz, R_S = 10K\Omega$	-	6	20	dB

Electrical Characteristic Curves

Fig. 1  $P_C-T_a$

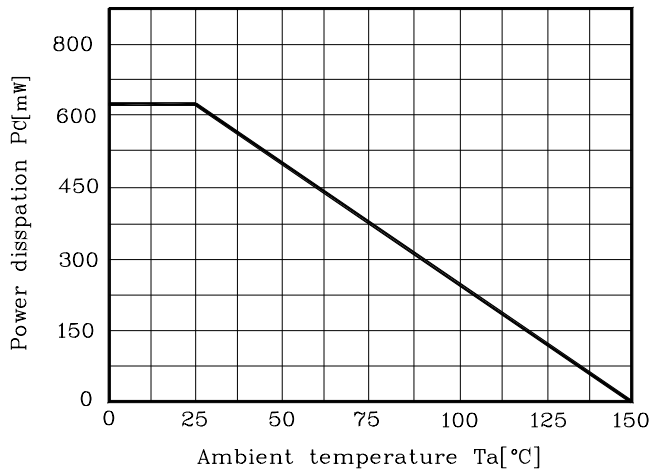


Fig. 2  $I_C-V_{BE}$

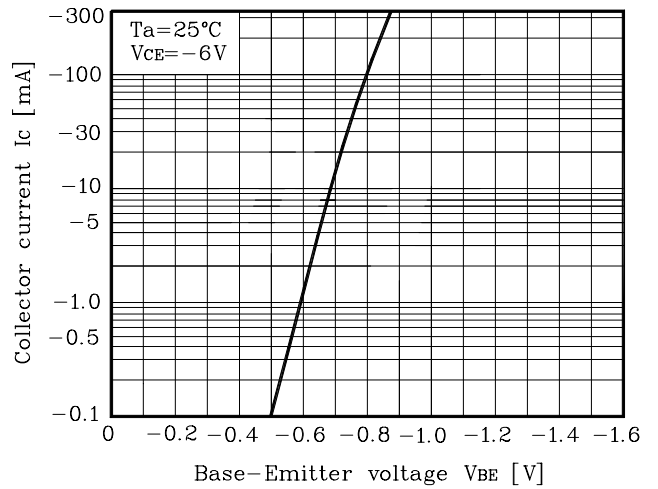


Fig. 3  $I_C-V_{CE}$

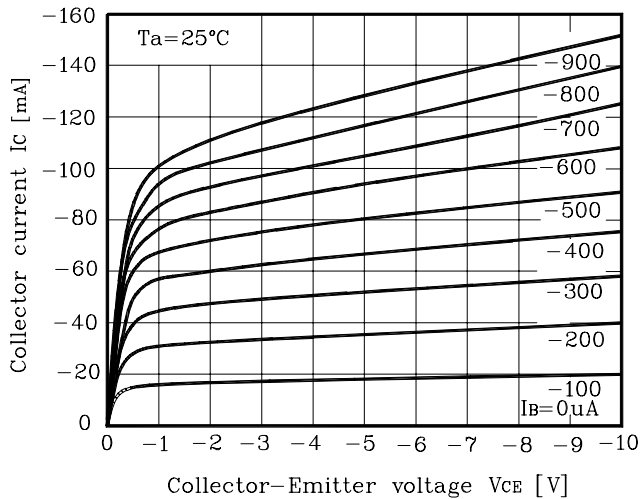


Fig. 4  $h_{FE}-I_C$

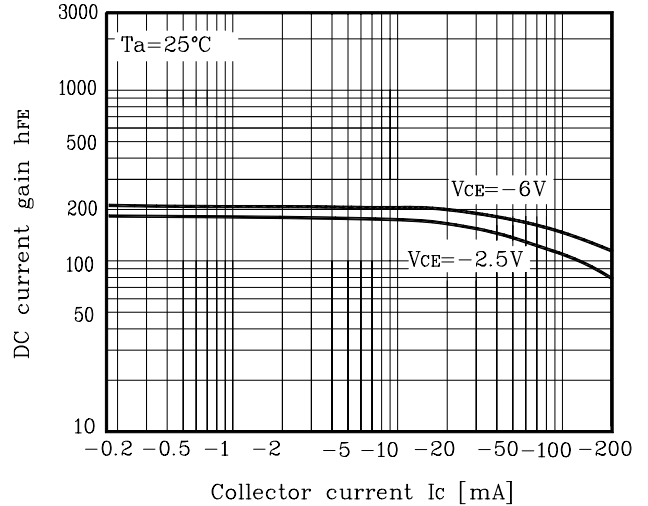
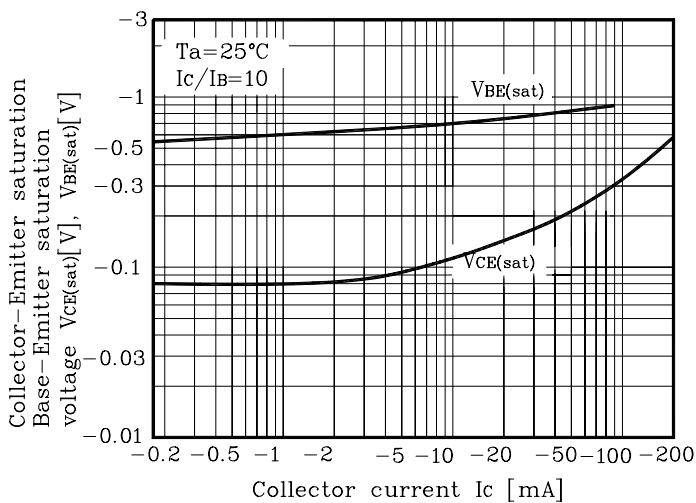


Fig. 5  $V_{CE(sat)}/V_{BE(sat)}-I_C$



**These AUK products are intended for usage in general electronic equipments(Office and communication equipment, measuring equipment, domestic electrification, etc.).**

**Please make sure that you consult with us before you use these AUK 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, traffic signal, combustion central, all types of safety device, etc.).**

**AUK cannot accept liability to any damage which may occur in case these AUK products were used in the mentioned equipments without prior consultation with AUK.**