

## Descriptions

- General small signal amplifier
- Switching application

## Features

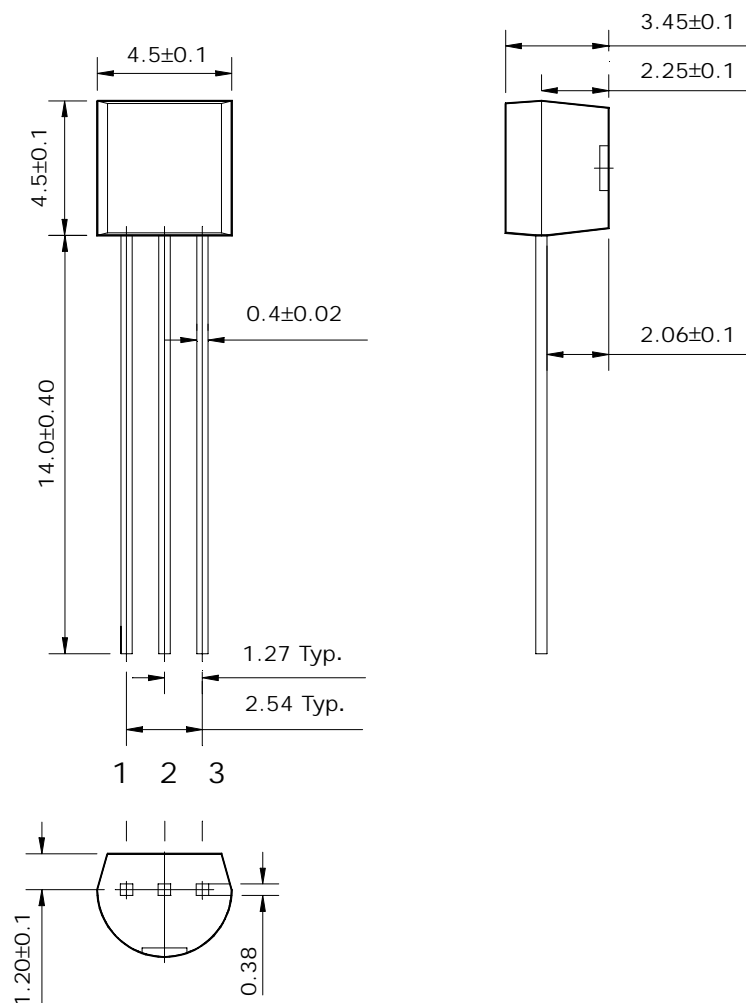
- Collector saturation voltage :  $V_{CE(sat)} = -0.5V(\text{Max.})$
- Low output capacitance :  $C_{ob} = 4.5pF(\text{Max.})$
- Complementary pair with STN3904

## Ordering Information

Type NO.	Marking	Package Code
STN3906	STN3906	TO-92

## Outline Dimensions

unit : mm



### PIN Connections

1. Emitter
2. Base
3. Collector

## Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	$V_{CBO}$	-40	V
Collector-Emitter voltage	$V_{CEO}$	-40	V
Emitter-Base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-100	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-Emitter breakdown voltage	$BV_{CEO}$	$I_C = -1\text{mA}$	-40	-	-	V
Collector-Base breakdown voltage	$BV_{CBO}$	$I_C = -10\mu\text{A}$	-40	-	-	V
Emitter-Base breakdown voltage	$BV_{EBO}$	$I_E = -10\mu\text{A}$	-5	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -40\text{V}, I_E = 0$	-	-	-0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE} = -1\text{V}, I_C = -10\text{mA}$	100	-	300	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C = -50\text{mA}, I_B = -5\text{mA}$	-	-	-0.5	V
Transition frequency	$f_T$	$V_{CE} = -20\text{V}, I_C = -10\text{mA}$	250	-	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -5\text{V}, I_E = 0, f = 1\text{MHz}$	-	-	4.5	pF

## Electrical Characteristic Curves

Fig. 1  $P_C$ - $T_a$

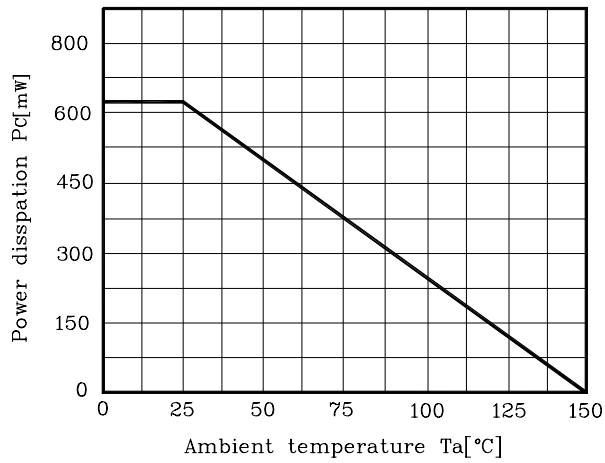


Fig. 2  $I_C$  -  $V_{BE}$

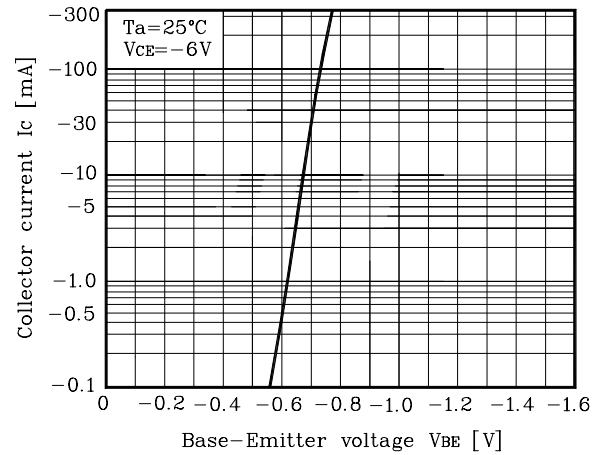


Fig. 3  $h_{FE}$  -  $I_C$

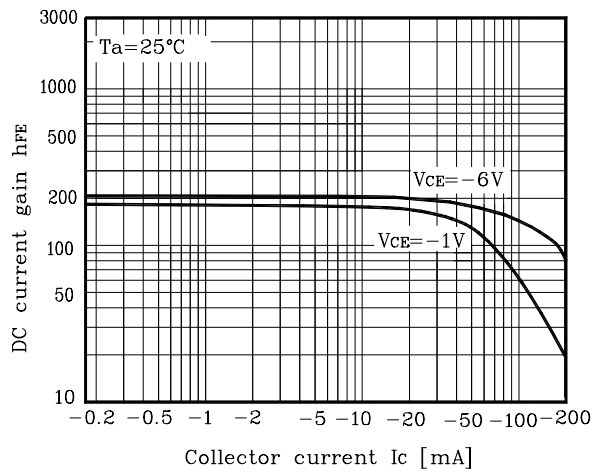


Fig. 4  $I_C$  -  $V_{CE}$

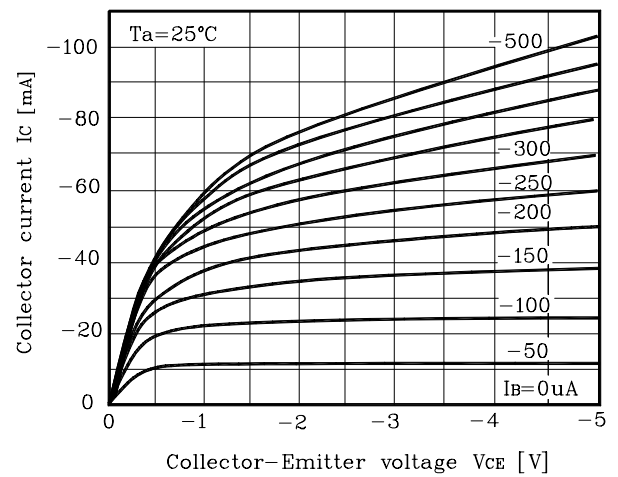


Fig. 5  $V_{CE(sat)}$  -  $I_C$

