

Descriptions

- General small signal amplifier
- Switching application

Features

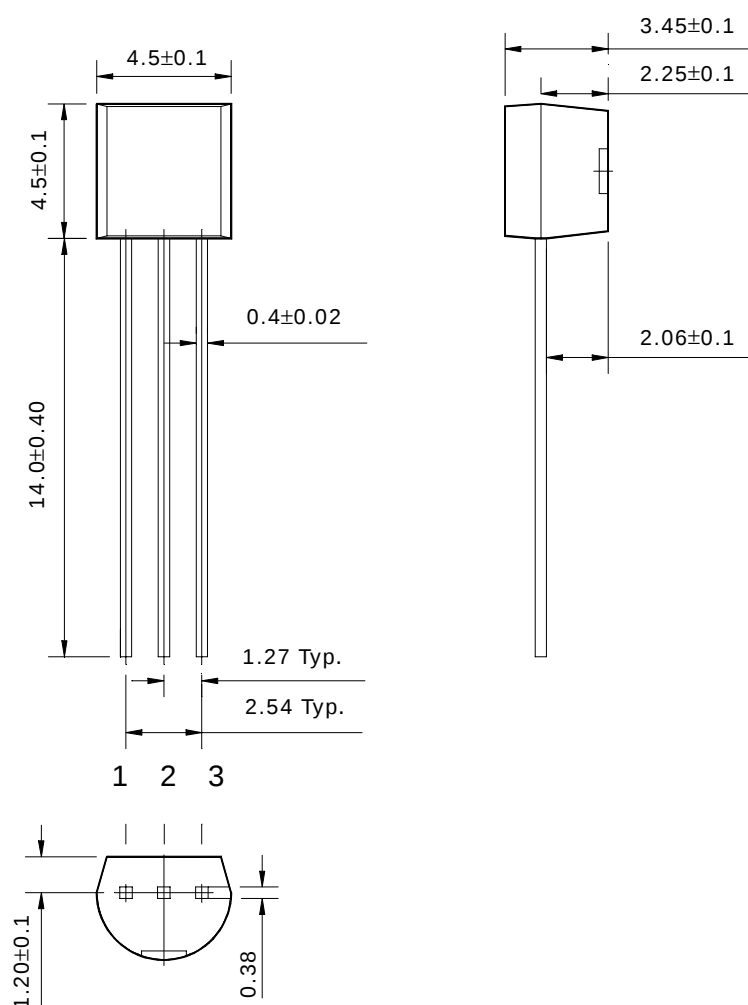
- Low collector saturation voltage
- Collector output capacitance
- Complementary pair with STN3906

Ordering Information

Type NO.	Marking	Package Code
STN3904	STN3904	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}	60	V
Collector-Emitter voltage	V_{CEO}	40	V
Emitter-Base voltage	V_{EBO}	6	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-Base breakdown voltage	BV_{CBO}	$I_C = 10\mu A, I_E = 0$	60	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	$I_C = 1mA, I_B = 0$	40	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	$I_E = 10\mu A, I_C = 0$	6	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB} = 60V, I_E = 0$	-	-	0.1	μA
DC current gain	h_{FE}	$V_{CE} = 1V, I_C = 10mA$	100	-	300	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C = 50mA, I_B = 5mA$	-	-	0.4	V
Transition frequency	f_T	$V_{CE} = 20V, I_C = 10mA$	300	-	-	MHz
Collector output capacitance	C_{ob}	$V_{CE} = 5V, I_E = 0, f = 1MHz$	-	-	4	pF

Electrical Characteristic Curves

Fig. 1 P_C - T_a

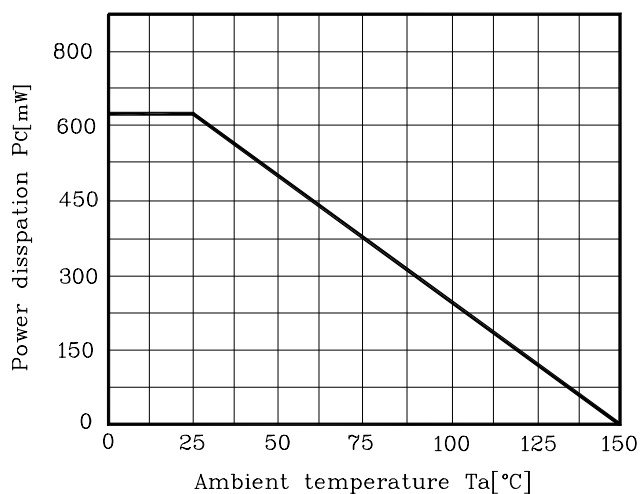


Fig. 2 I_C - V_{BE}

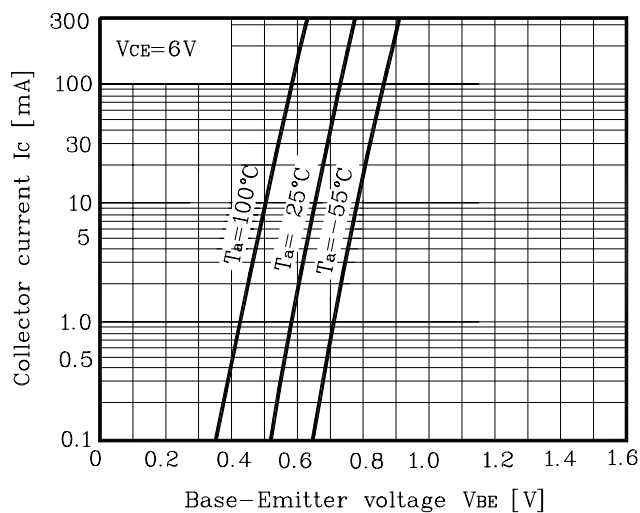


Fig. 3 I_C - V_{CE}

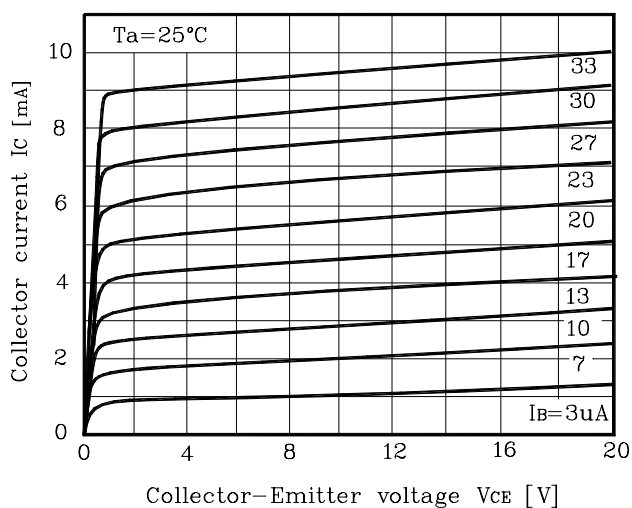


Fig. 4 h_{FE} - I_C

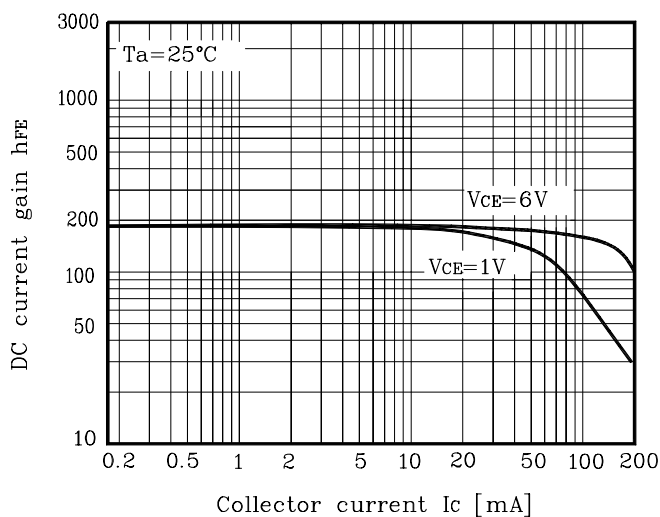


Fig. 5 $V_{CE(sat)}$ - I_C

