

**Descriptions**

- General purpose small signal amplifier
- Switching application

**Features**

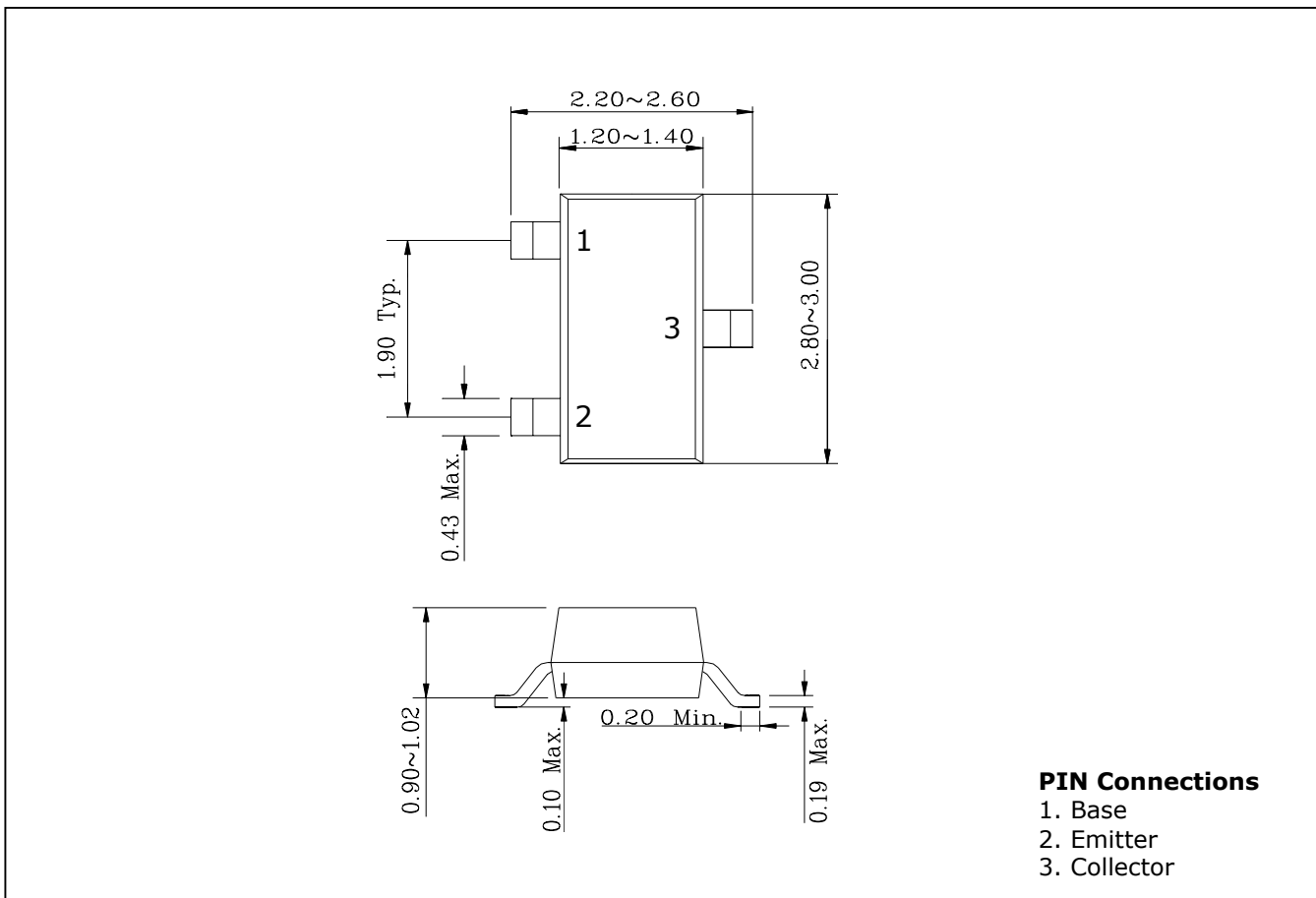
- Collector saturation voltage :  $V_{CE(sat)} = -0.5V(\text{Max.}) @ I_C = -50mA, I_B = -5mA$
- Low output capacitance :  $C_{ob} = 4.5pF(\text{Max.}) @ V_{CB} = -5V, I_E = 0, f = 1MHz$
- Complementary pair with STN3904S

**Ordering Information**

Type NO.	Marking	Package Code
STN3906S	JA	SOT-23

**Outline Dimensions**

unit : mm



## Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Rating	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 power dissipation	$P_C^*$	350	mW
Junction temperature	$T_J$	150	°C
Storage temperature range	$T_{stg}$	-55~150	°C

\* : Package mounted on 99.5% alumina 10×8×0.6mm

## Electrical Characteristics

(Ta=25°C)

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

Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

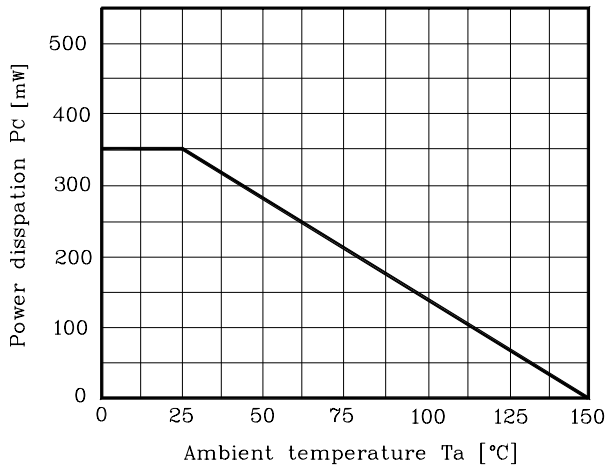


Fig. 2  $I_C - V_{BE}$

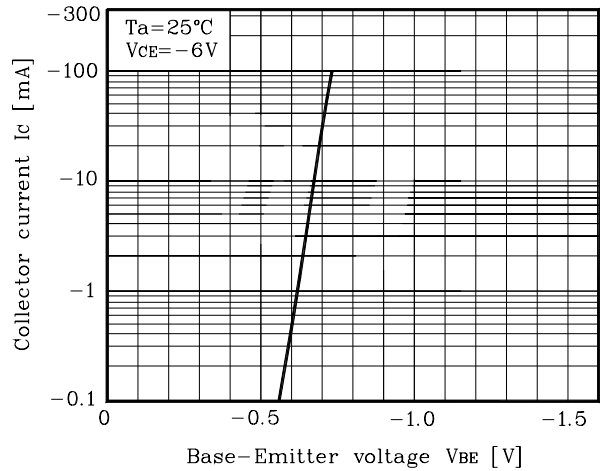


Fig. 3  $h_{FE} - I_C$

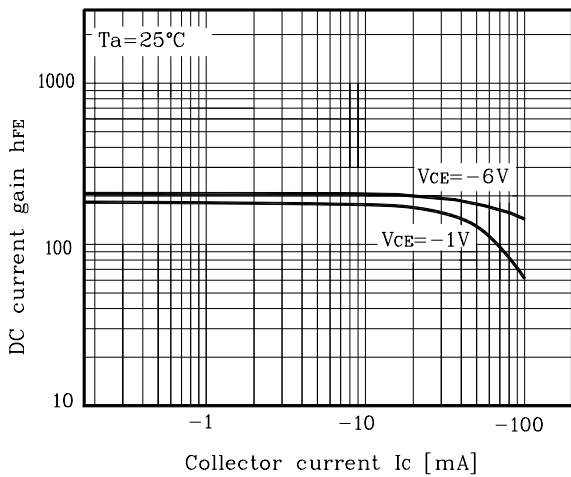


Fig. 4  $I_C - V_{CE}$

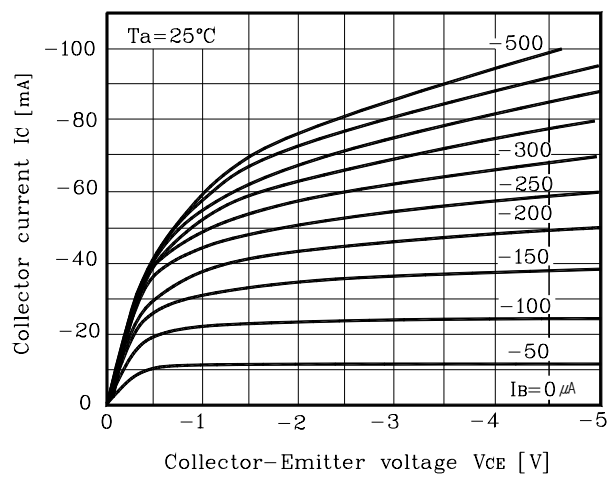
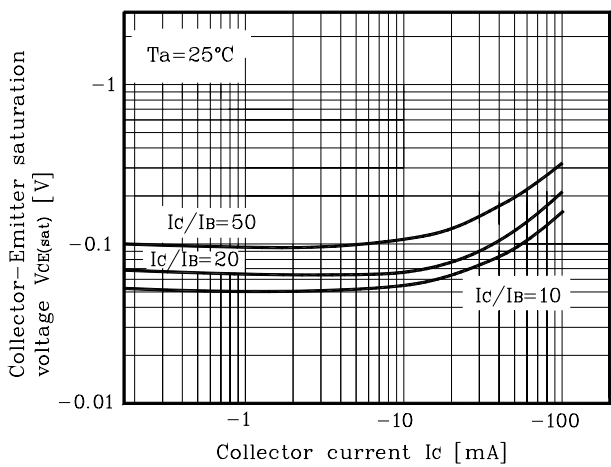


Fig. 5  $V_{CE(sat)} - I_C$



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