

Descriptions

- General purpose small signal amplifier
- Switching application

Features

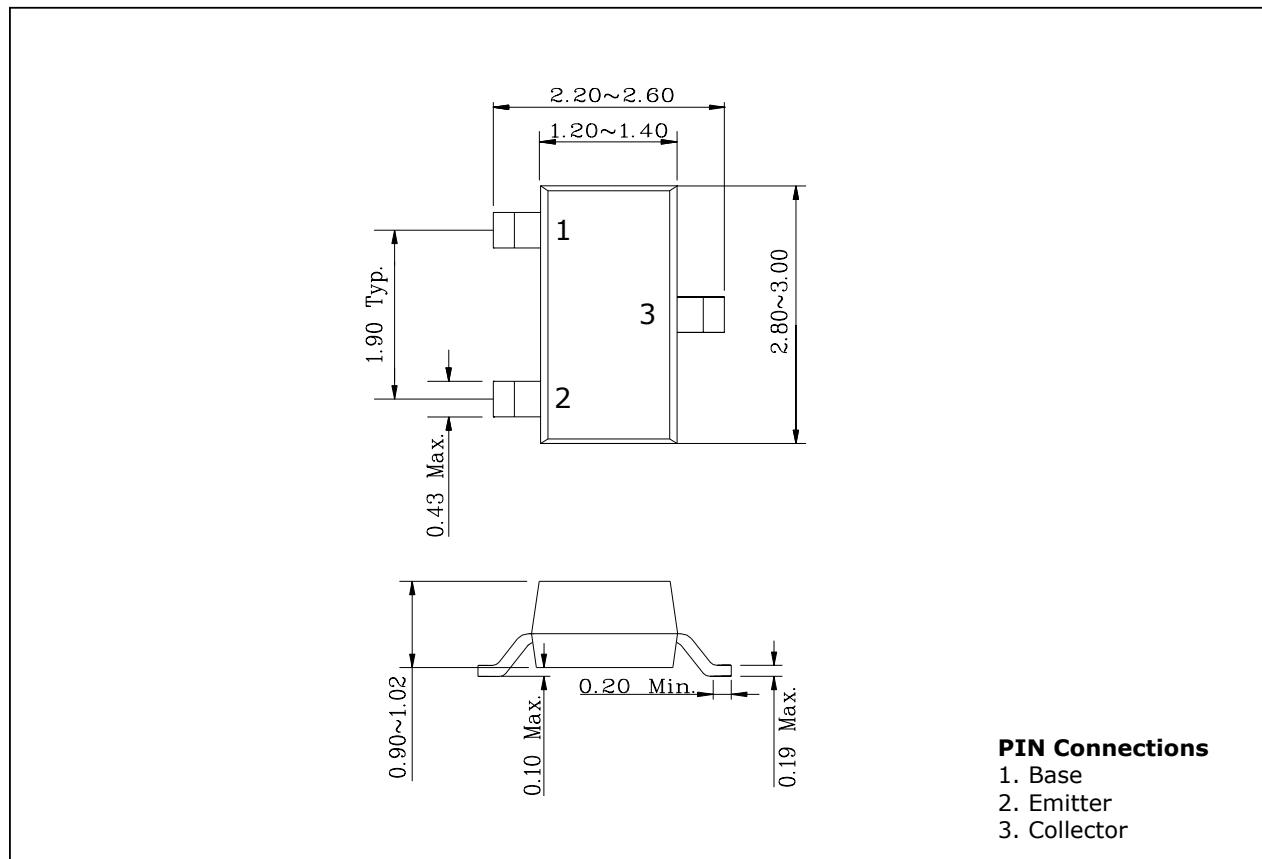
- Collector saturation voltage : $V_{CE(sat)} = -0.5V(\text{Max.}) @ I_C = -50mA, I_B = -5mA$
- Low output capacitance : $C_{ob} = 4.5pF(\text{Max.}) @ V_{CB} = -5V, I_E = 0, f = 1MHz$
- Complementary pair with STN3904S

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	μA
DC current gain	h_{FE}	$V_{CE} = -1V, I_C = -10mA$	100	-	300	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C = -50mA, I_B = -5mA$	-	-	-0.5	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 $P_C - T_a$

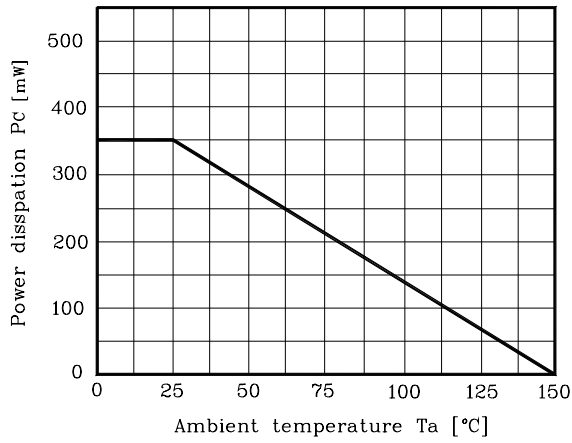


Fig. 2 $I_C - V_{BE}$

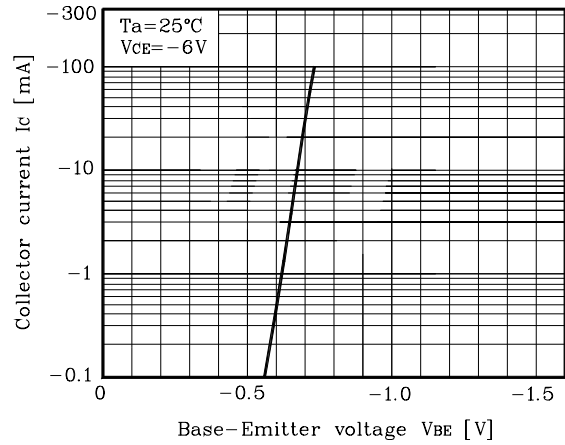


Fig. 3 $h_{FE} - I_C$

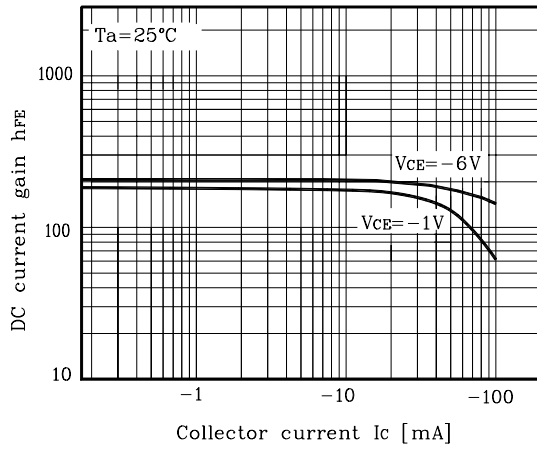


Fig. 4 $I_C - V_{CE}$

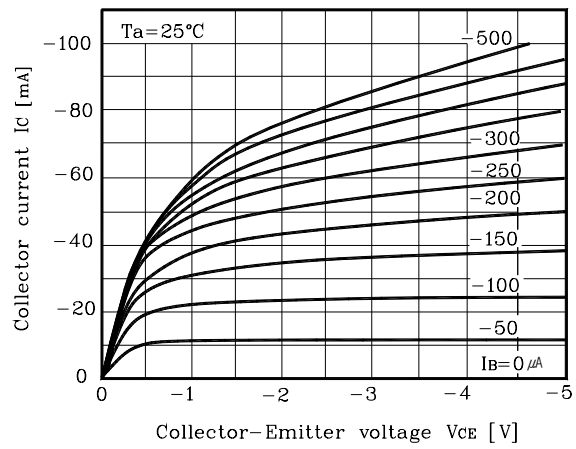
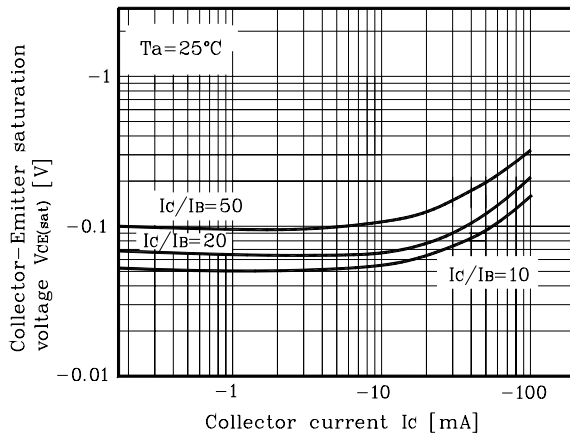


Fig. 5 $V_{CE(sat)} - I_C$



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