AUK Semiconductor

STA92N

PNP Silicon Transistor

Descriptions

- High voltage application

Features

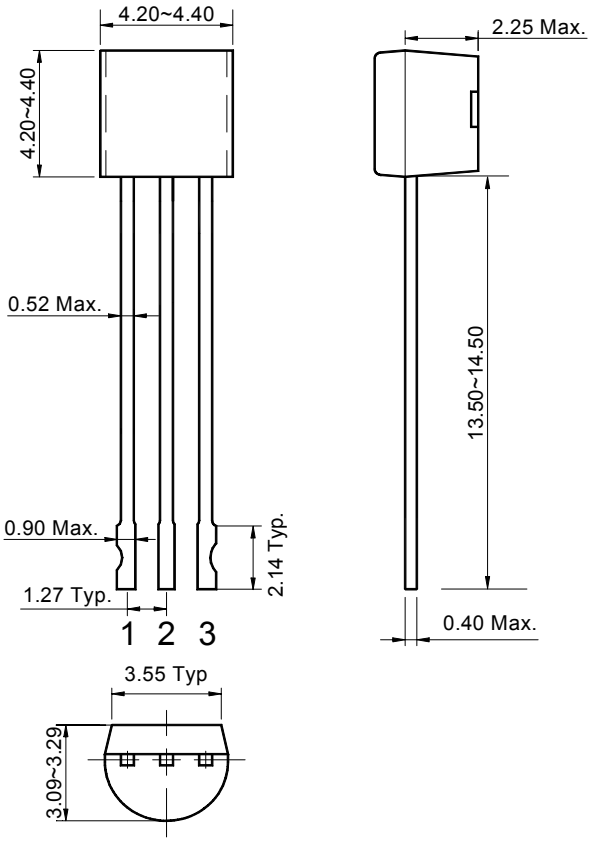
- High collector-emitter voltage : V_{CEO}=-300V
- Complementary pair with STC42N

Ordering Information

Type NO.	Marking	Package Code
STA92N	STA92	T0-92N

Outline Dimensions

unit : mm



PIN Connections

1. Emitter
2. Base
3. Collector

Absolute Maximum Ratings (Ta=25°C)

Characteristic	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-300	V
Collector-emitter voltage	V_{CEO}	-300	V
Emitter-base voltage	V_{EBO}	-6	V
Collector current	I_C	-500	mA
Collector power dissipation	P_C	400	mW
Junction temperature	T_J	150	°C
Storage temperature range	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=-1mA, I_B=0	-300	-	-	V
Collector cut-off current	I_{CBO}	V_{CB}=-300V, I_E=0	-	-	-0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=-6V, I_C=0	-	-	-0.1	μA
DC current gain	h_{FE} *	V_{CE}=-10V, I_C=-30mA	40	-	-	-
Collector-emitter saturation voltage	$V_{CE(sat)}$ *	I_C=-20mA, I_B=-2mA	-	-	-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$ *	I_C=-20mA, I_B=-2mA	-	-	-0.9	V
Base-emitter voltage	V_{BE}	V_{CE}=-10V, I_C=-30mA	-	-0.7	-0.9	V
Transition frequency	f_T	V_{CE}=-20V, I_C=-10mA	-	80	-	MHz
Collector output capacitance	C_{ob}	V_{CB}=-20V, I_E=0, f=1MHz	-	3	-	pF

* : Pulse Tester : Pulse Width≤ 300 μs, Duty Cycle≤ 2.0%

Electrical Characteristic Curves

Fig. 1 h_{FE} - I_C

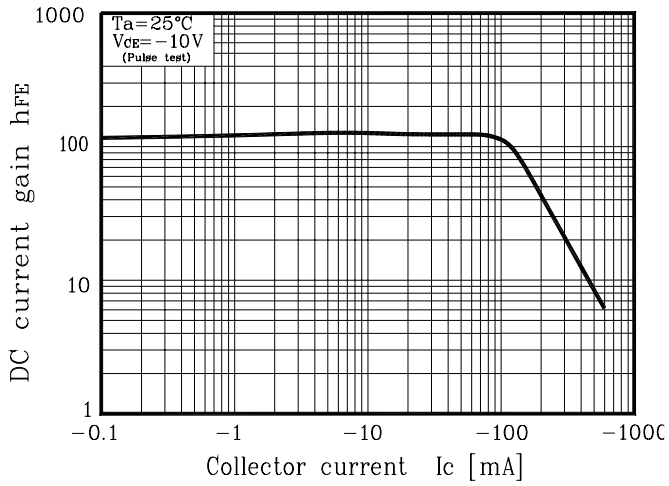


Fig. 2 $V_{CE(sat)}$,$V_{BE(sat)}$ - I_C

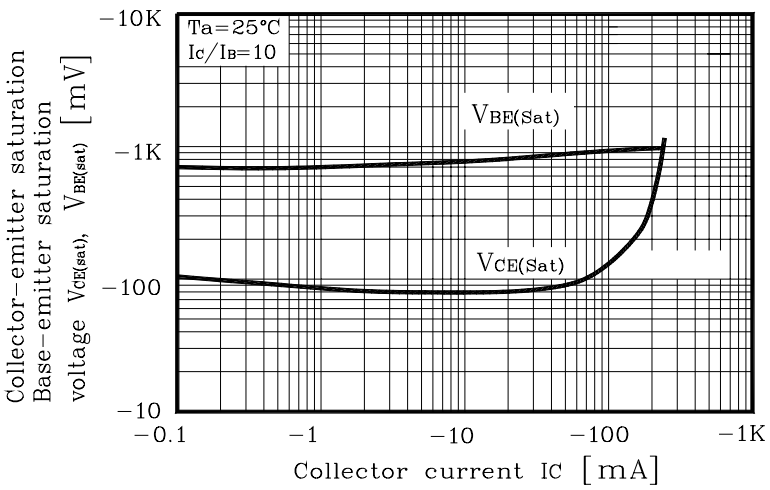


Fig. 3 f_T - I_C

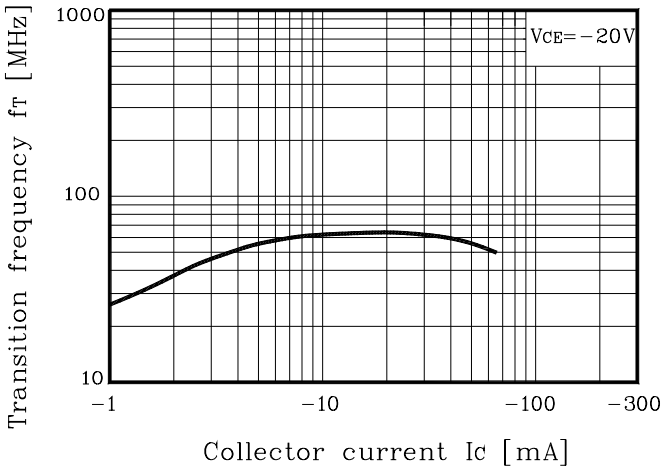


Fig. 4 C_{ob} - V_{CB}