AUK Semiconductor

STC8050N

NPN Silicon Transistor

Descriptions

- High current application
- Radio in class B push-pull operation

Feature

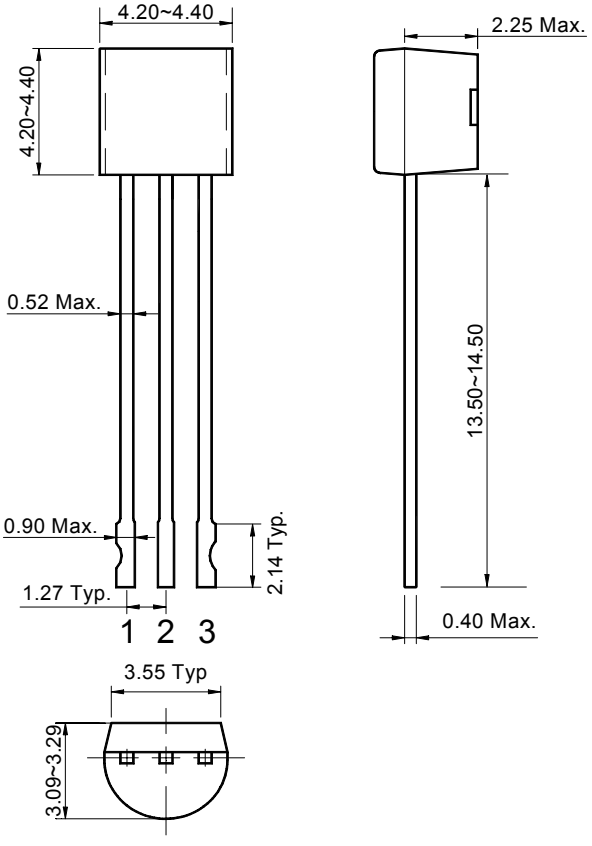
- Complementary pair with STA8550N

Ordering Information

Type NO.	Marking	Package Code
STC8050N	STC8050	TO-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}	30	V
Collector-emitter voltage	V_{CEO}	25	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	800	mA
Emitter current	I_E	-800	mA
Collector power dissipation	P_C	500	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	25	-	-	V
Collector cut-off current	I_{CBO}	V_{CB}=30V, I_E=0	-	-	50	nA
Emitter cut-off current	I_{EBO}	V_{EB}=6V, I_C=0	-	-	50	nA
DC current gain	h_{FE}*	V_{CE}=1V, I_C=50mA	85	-	300	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500mA, I_B=50mA	-	-	0.5	V
Base-emitter voltage	V_{BE}	V_{CE}=1V, I_C=500mA	-	0.85	1.2	V
Transition frequency	f_T	V_{CE}=5V, I_C=10mA	-	180	-	MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0	-	19	-	pF

* : h_{FE} Rank / B : 85~160, C : 120~200, D : 160~300

Electrical Characteristic Curves

Fig. 1 Pc - Ta

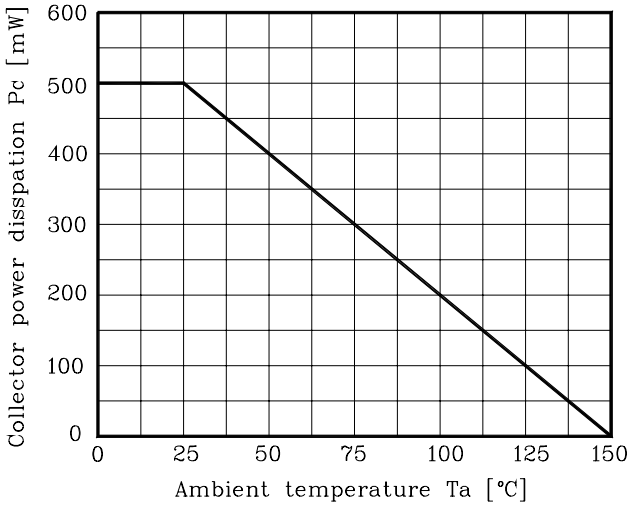


Fig. 2 I_C - V_{BE}

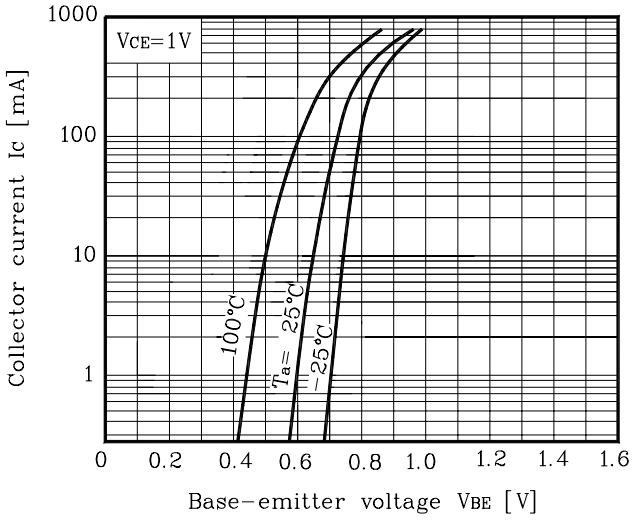


Fig. 3 I_C - V_{CE}

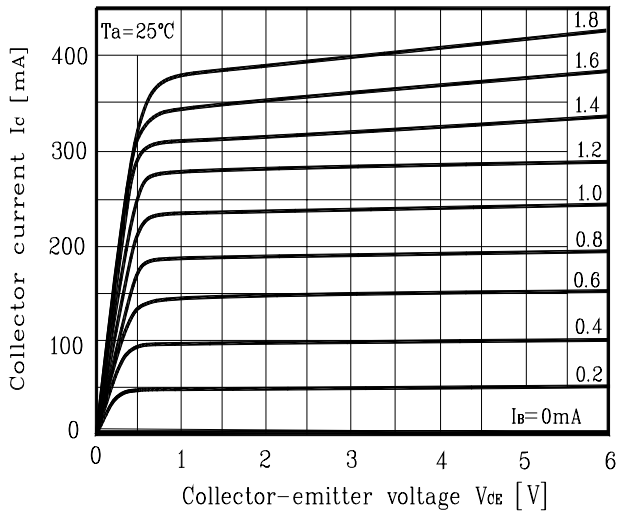


Fig. 4 $V_{CE(SAT)}$ - I_C

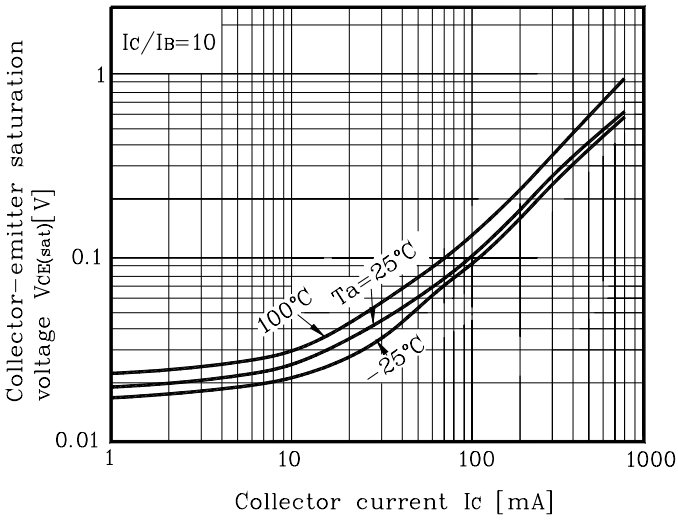


Fig. 5 h_{FE} - I_C

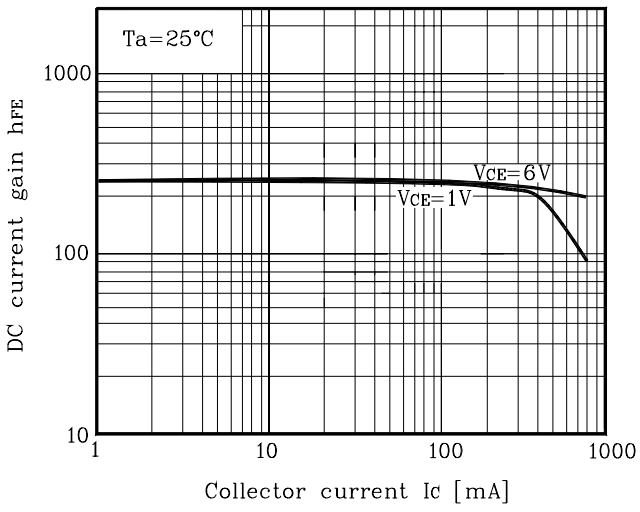
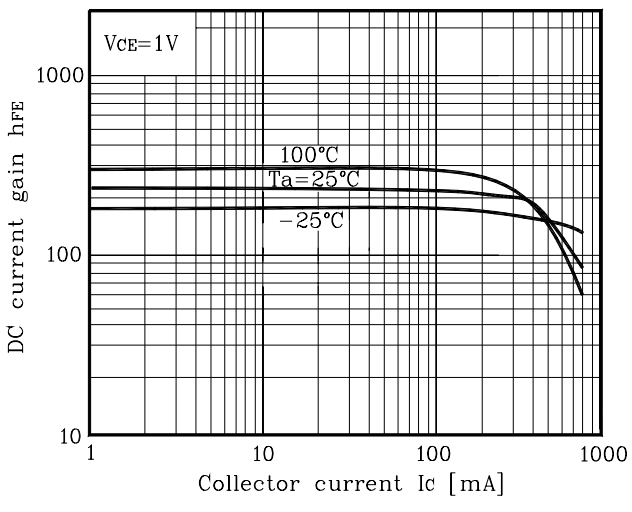


Fig. 6 h_{FE} - I_C



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