

Descriptions

- General purpose application
- Switching application

Features

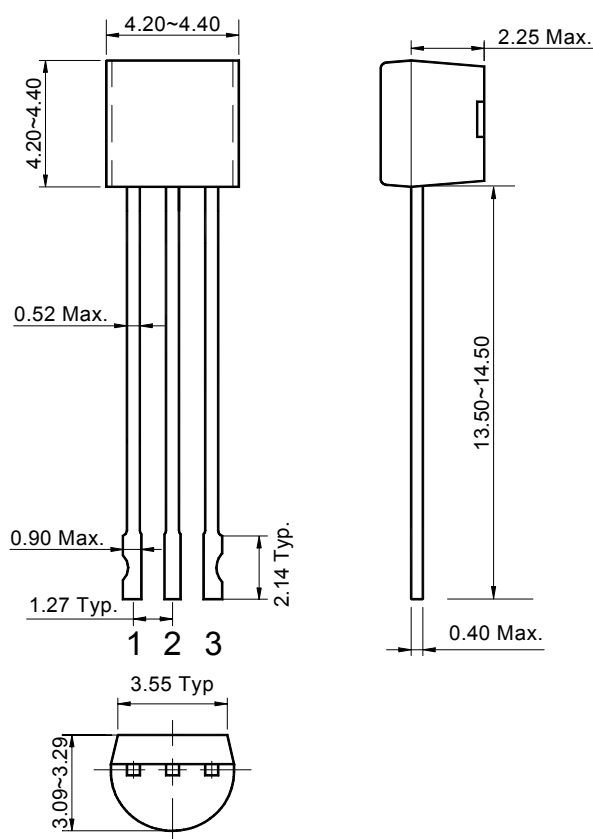
- Large collector current : $I_C = -600\text{mA}$
- Low collector saturation voltage
- Complementary pair with STC2222AN

Ordering Information

Type NO.	Marking	Package Code
STA2907AN	STA2907A	TO-92N

Outline Dimensions

unit : mm



PIN Connections

1. Emitter
2. Base
3. Collector

STA2907AN**Absolute Maximum Ratings**

Ta=25°C

Characteristic	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-60	V
Collector-emitter voltage	V_{CEO}	-50	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-600	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}	$I_C = -1\text{mA}, I_B = 0$	-50	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB} = -60\text{V}, I_E = 0$	-	-	-50	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$	-	-	-50	nA
DC current gain	h_{FE}	$V_{CE} = -10\text{V}, I_C = -10\text{mA}$	100	-	-	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -150\text{mA}, I_B = -15\text{mA}$	-	-	-0.4	V
Base-emitter voltage	V_{BE}	$V_{CE} = -10\text{V}, I_C = -10\text{mA}$	-	-0.66	-0.85	V
Transition frequency	f_T	$V_{CE} = -20\text{V}, I_C = -20\text{mA}$	-	250	-	MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$	-	6.0	-	pF

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Electrical Characteristic Curves

Fig. 1 $P_C - T_a$

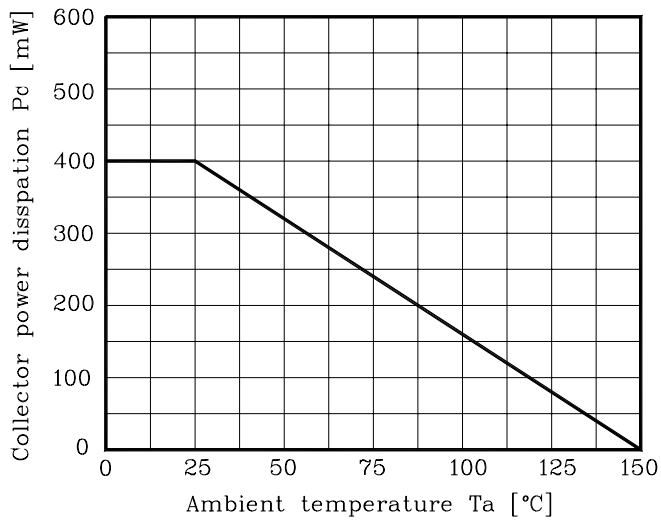


Fig. 2 $I_C - V_{BE}$

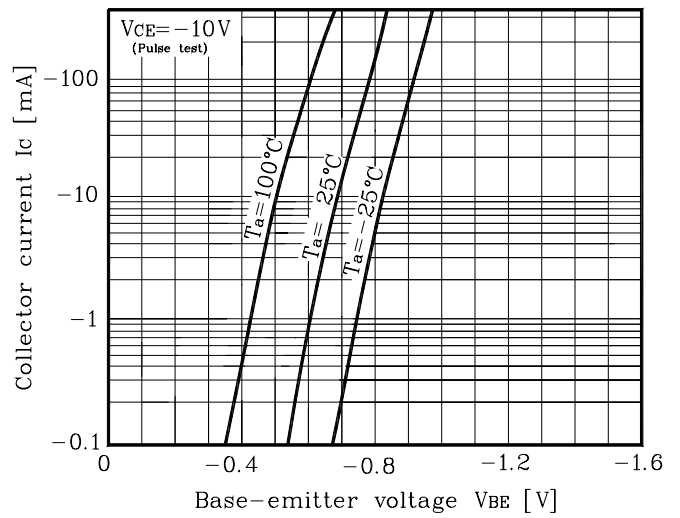


Fig. 3 $I_C - V_{CE}$

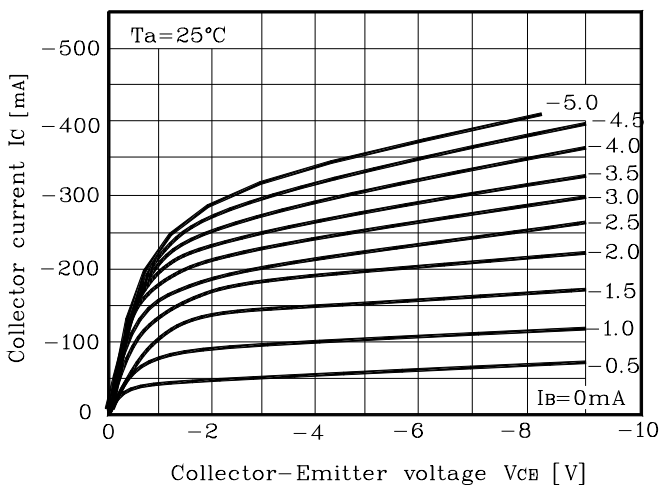


Fig. 4 $V_{CE(sat)} - I_C$

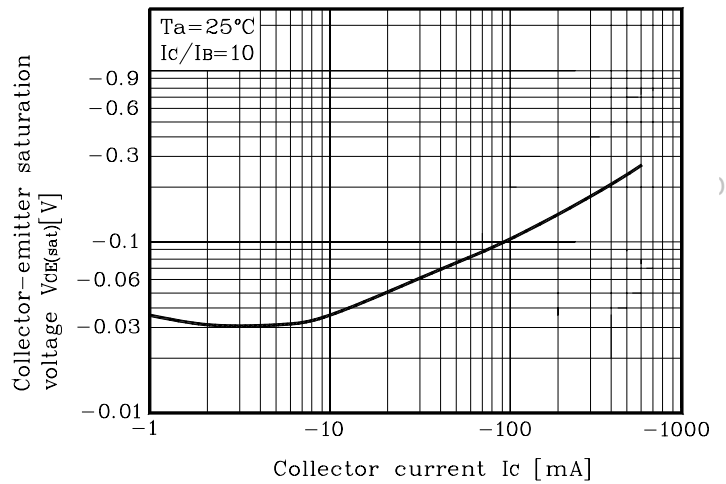


Fig. 5 $h_{FE} - I_C$

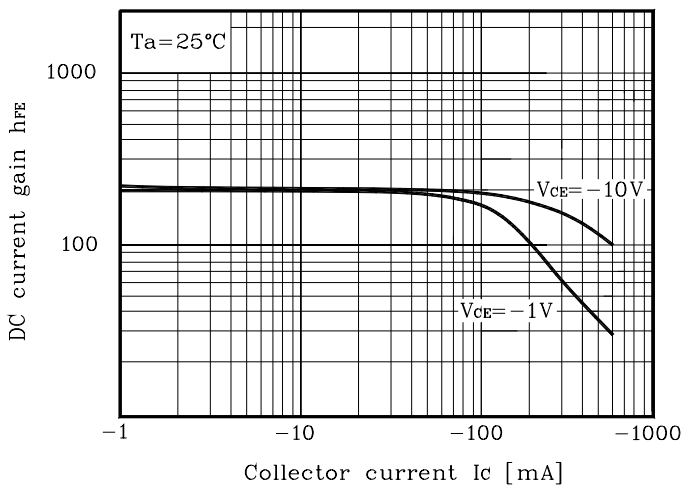
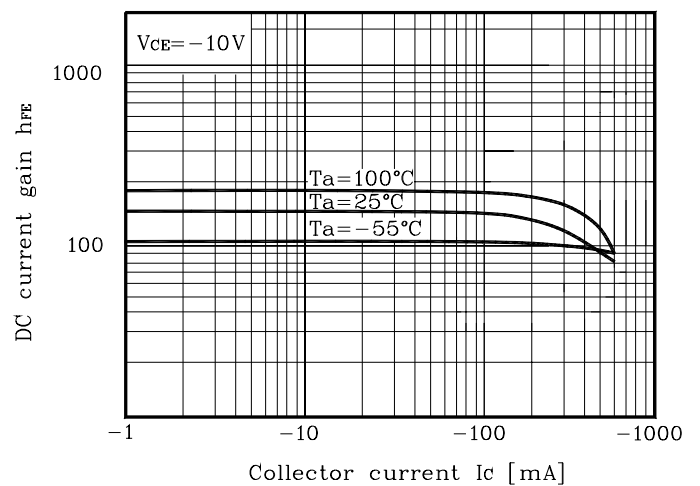


Fig. 6 $h_{FE} - I_C$



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