

## Description

- High frequency low noise amplifier application
- VHF band amplifier application

## Features

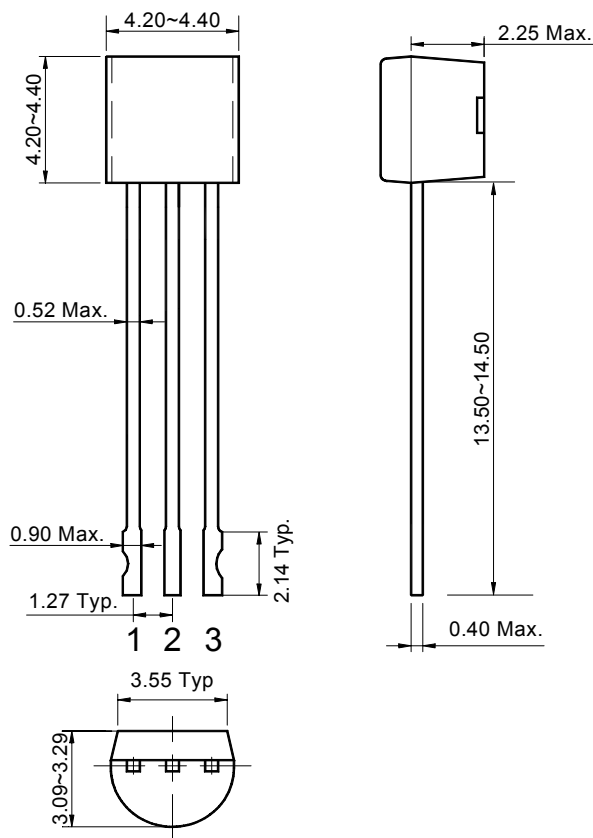
- Low noise figure :  $NF = 4dB(Typ.)$  at  $f=100MHz$
- High transition frequency  $f_T = 800MHz(Typ.)$

## Ordering Information

Type NO.	Marking	Package Code
STC9018N	STC9018	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	$V_{CBO}$	40	V
Collector-emitter voltage	$V_{CEO}$	30	V
Emitter-base voltage	$V_{EBO}$	4	V
Collector current	$I_C$	20	mA
Emitter current	$I_E$	-20	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 cut-off current	$I_{CBO}$	$V_{CB}=40V, I_E=0$	-	-	0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4V, I_C=0$	-	-	0.1	$\mu A$
DC current gain	$h_{FE}^*$	$V_{CE}=5V, I_C=1mA$	54	-	198	-
Transition frequency	$f_T$	$V_{CE}=10V, I_E=-8mA$		800	-	MHz
Noise figure	NF	$V_{CB}=6V, I_E=-1mA,$ $f=100MHz$	-	4	-	dB
Power gain	$G_{PE}$		-	20	-	

\* :  $h_{FE}$  rank / F : 54~80, G : 70~108, H : 97~146, I : 132~198.

## Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

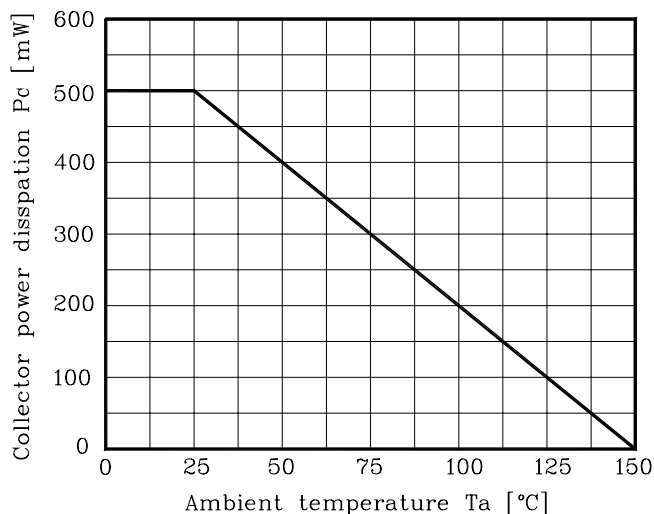


Fig. 2  $I_C - V_{CE}$

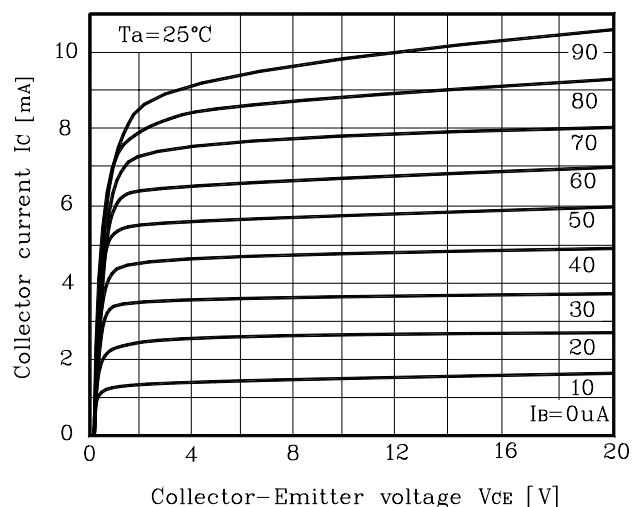


Fig. 3  $h_{FE} - I_C$

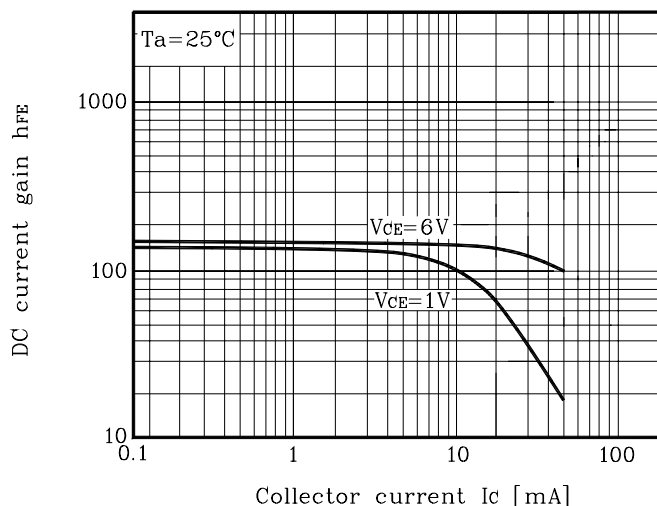
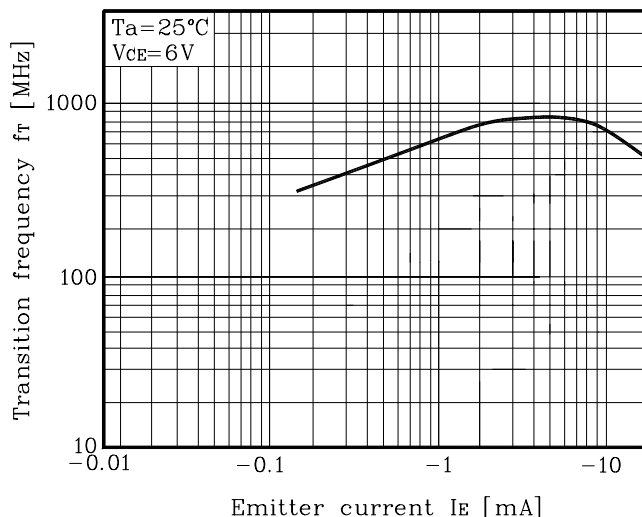


Fig. 4  $f_T - I_E$



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