

## Description

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

## Features

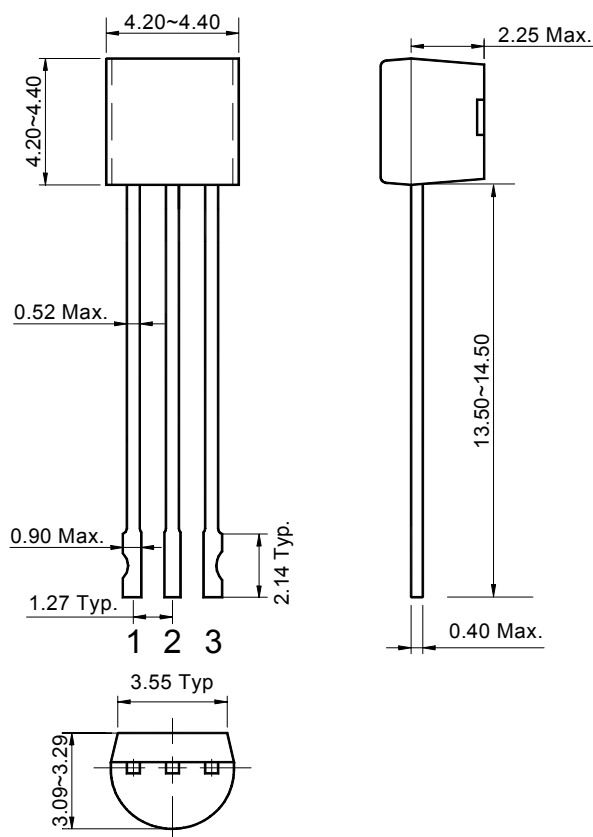
- Low noise figure :  $NF = 4\text{dB(Typ.)}$  at  $f=100\text{MHz}$
- High transition frequency  $f_T = 800\text{MHz(Typ.)}$

## Ordering Information

Type NO.	Marking	Package Code
STC9018N	STC9018	TO-92N

## Outline Dimensions

unit : mm



### PIN Connections

1. Emitter
2. Base
3. Collector

**STC9018N****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.

DataSheet4U.com

DataShe

## Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

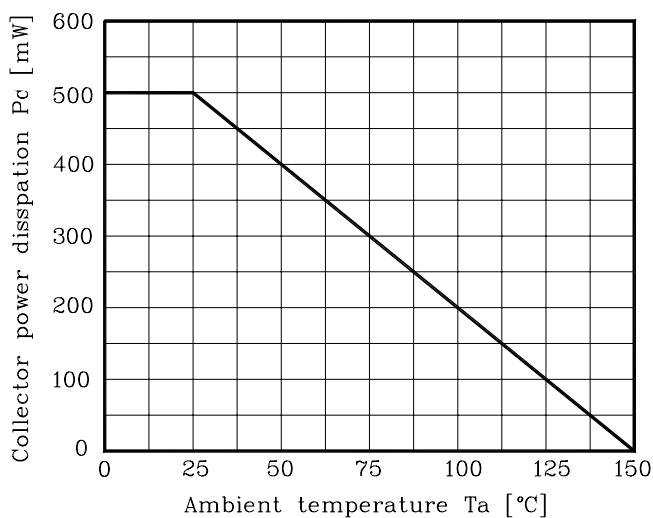


Fig. 2  $I_C - V_{CE}$

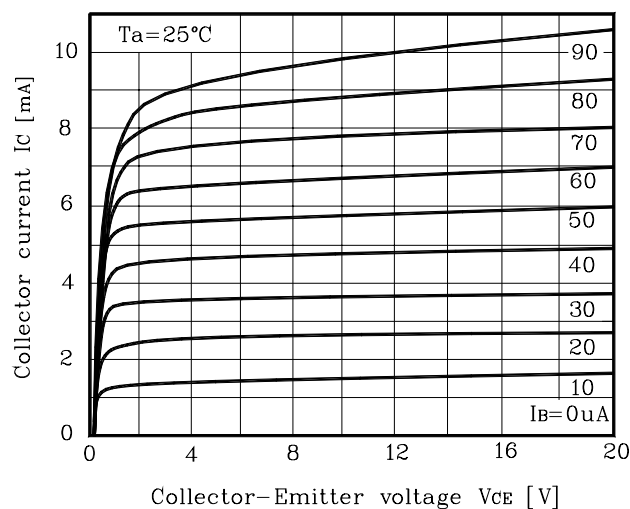


Fig. 3  $h_{FE} - I_C$

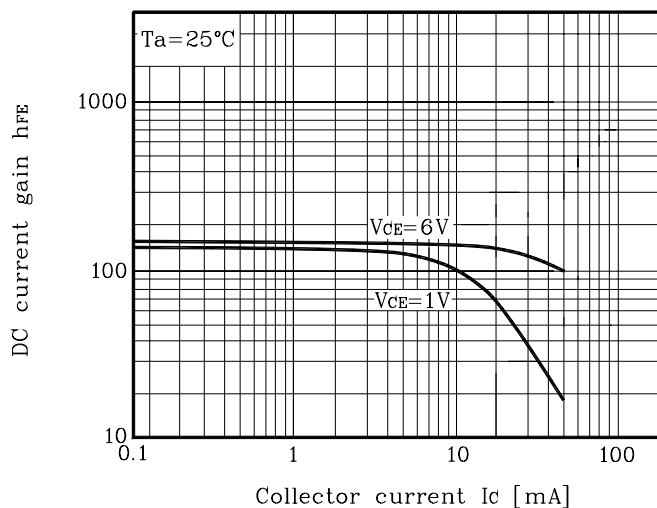
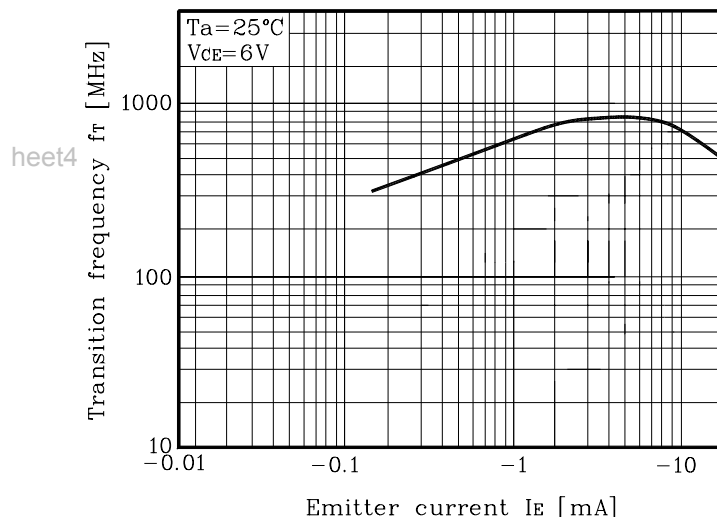


Fig. 4  $f_T - I_E$



The AUK Corp. products are intended for the use as components in general electronic equipment (Office and communication equipment, measuring equipment, home appliance, etc.).

Please make sure that you consult with us before you use these AUK Corp. products in equipments which require high quality and / or reliability, and in equipments which could have major impact to the welfare of human life (atomic energy control, airplane, spaceship, transportation, combustion control, all types of safety device, etc.). AUK Corp. cannot accept liability to any damage which may occur in case these AUK Corp. products were used in the mentioned equipments without prior consultation with AUK Corp..

Specifications mentioned in this publication are subject to change without notice.