

Description

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

Features

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

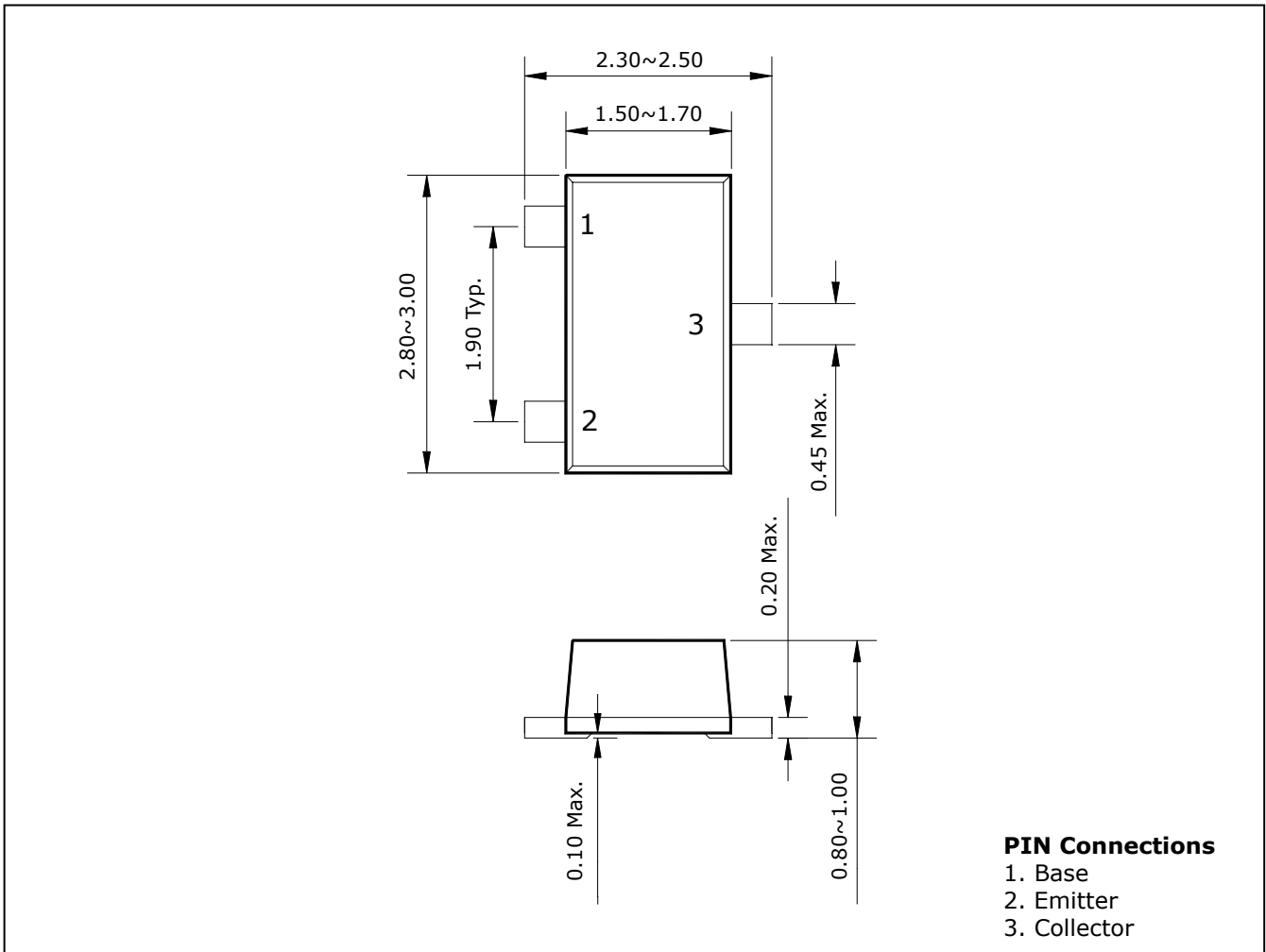
Ordering Information

Type NO.	Marking	Package Code
STC9018SF	9E□	SOT-23F

□ : h_{FE} rank

Outline Dimensions

unit : mm



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 *	350	mW
Junction temperature	T _J	150	°C
Storage temperature range	T _{stg}	-55~150	°C

* : Package mounted on 99.5% Alumina 10×8×0.6mm

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	μA
Emitter cut-off current	I _{EBO}	V _{EB} =4V, I _C =0	-	-	0.1	μA
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 $P_C - T_a$

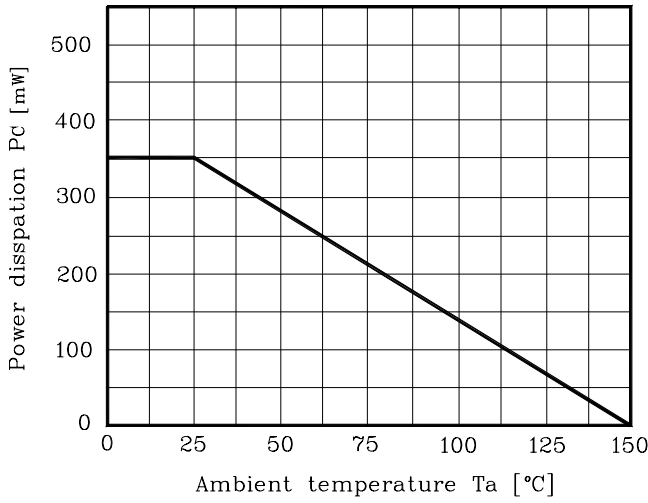


Fig. 2 $I_C - V_{CE}$

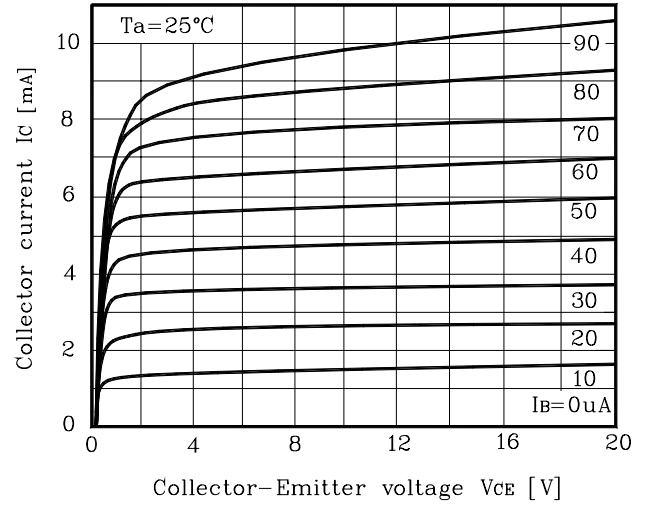


Fig. 3 $h_{FE} - I_C$

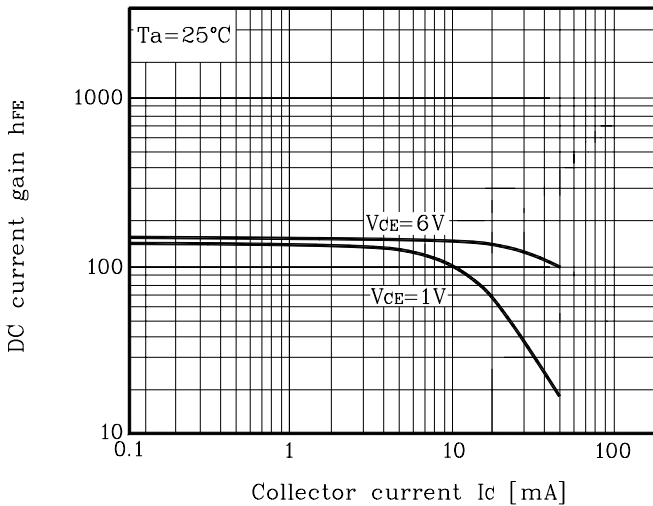
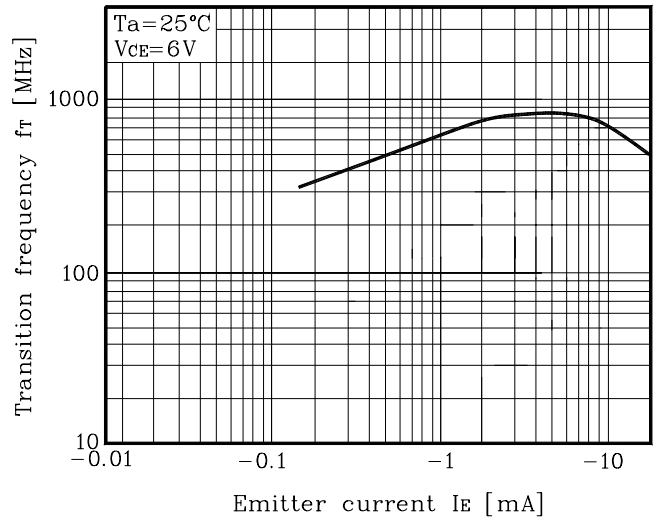


Fig. 4 $f_T - I_E$



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