

# 2SC2671(F)

Silicon NPN epitaxial planer type

For UHF band low-noise amplification

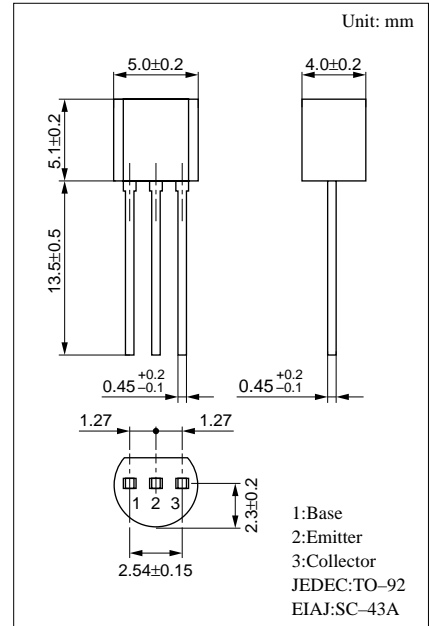
## Features

- Low noise figure NF.
- High gain.
- High transition frequency  $f_T$ .

## Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	15	V
Collector to emitter voltage	$V_{CER}^*$	14	V
Emitter to base voltage	$V_{EBO}$	2	V
Collector current	$I_C$	80	mA
Collector power dissipation	$P_C$	600	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 ~ +150	°C

\*REB = 1k $\Omega$

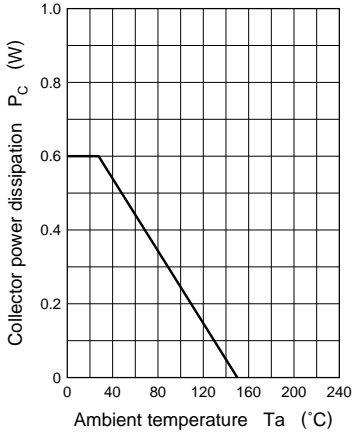


## Electrical Characteristics (Ta=25°C)

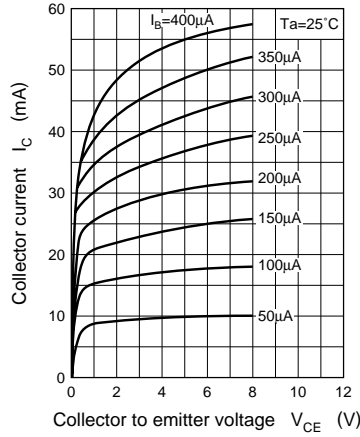
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 10V, I_E = 0$			1	$\mu A$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 1V, I_C = 0$			1	$\mu A$
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 8V, I_C = 40mA$	50	150	300	
Transition frequency	$f_T^*$	$V_{CE} = 8V, I_C = 40mA, f = 800MHz$	3.5	5.5		GHz
Collector output capacitance	$C_{ob}^*$	$V_{CB} = 10V, I_E = 0, f = 1MHz$		0.8	1.5	pF
Forward transfer gain	$ S_{21e} ^2$	$V_{CE} = 8V, I_C = 40mA, f = 800MHz$	9	12		dB
Maximum unilateral power gain	GUM*	$V_{CE} = 8V, I_C = 40mA, f = 800MHz$	10	13	15	dB
Noise figure	NF*	$V_{CE} = 8V, I_C = 40mA, f = 800MHz$		2.0	3.2	dB
Second inter modulation distortion	$IM_2^*$	$V_{CE} = 8V, I_C = 40mA, f_1 = 200MHz, f_2 = 500MHz, V_O = 100dB\mu/75\Omega$	50	60		dB
Third inter modulation distortion	$IM_3^*$	$V_{CE} = 8V, I_C = 40mA, f_1 = 600MHz, f_2 = 500MHz, V_O = 100dB\mu/75\Omega$	75	86		dB

\*LTPD = 10%

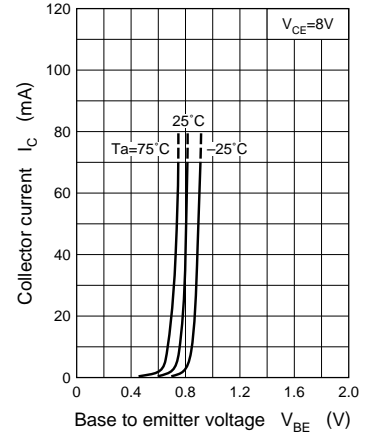
$P_C - T_a$



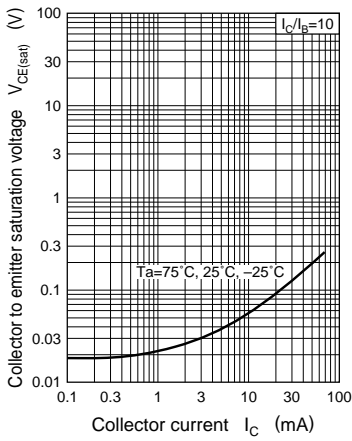
$I_C - V_{CE}$



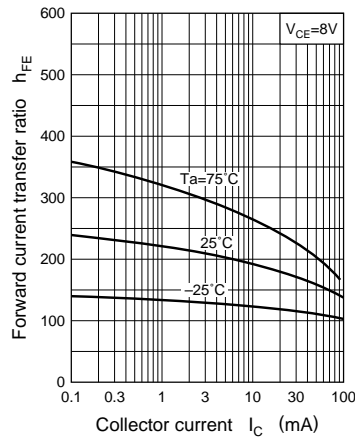
$I_C - V_{BE}$



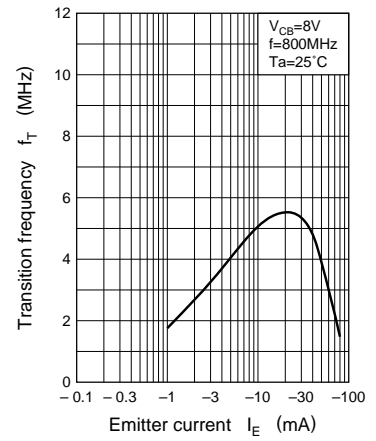
$V_{CE(sat)} - I_C$



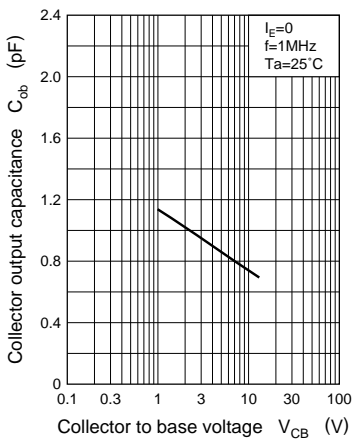
$h_{FE} - I_C$



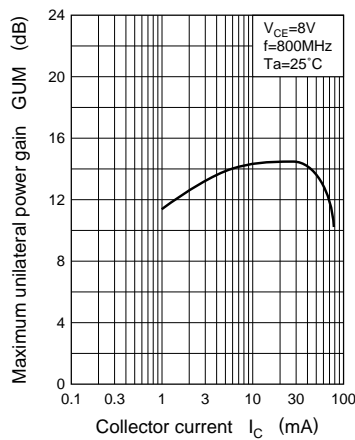
$f_T - I_E$



$C_{ob} - V_{CB}$



GUM -  $I_C$



NF -  $I_C$

