2SC2671(H)

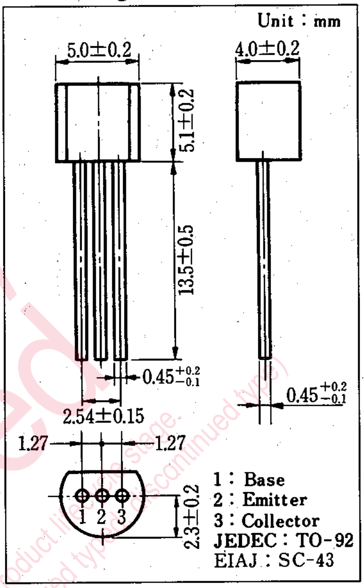
Silicon NPN Epitaxial Planar Type

For UHF band low-noise amplification

■ Features

- Low noise figure NF
- Large power gain PG
- High transition frequency f_T

■ Package Dimensions



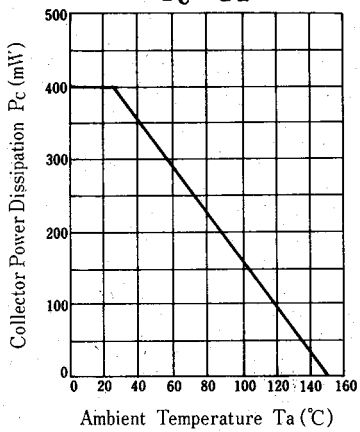
■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	25	V
Collector-Emitter Voltage	V_{CEO}	12	V
Emitter-Base Voltage	V_{EBO}	2.5	V
Collector Current	I_C	70	mA
Collector Power Dissipation	P_C	400	mW
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	−55～+150	℃

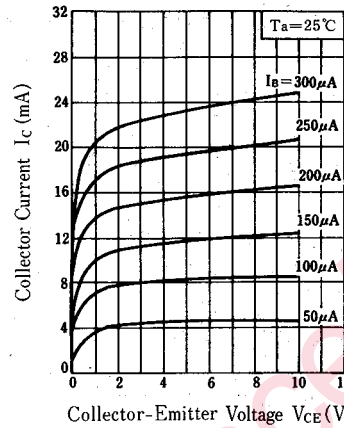
■ Electrical Characteristics (Ta=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=15$ V, $I_E=0$			100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=2$ V, $I_C=0$			100	nA
DC Current Gain	h_{FE}	$V_{CE}=10$ V, $I_C=20$ mA	40		200	
Transition Frequency	f_T	$V_{CB}=10$V, $I_E=-20$mA, f=800MHz		4.5		GHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10$ V, $I_E=0$, f=1 MHz		1	1.5	pF
Forward Transfer Gain	$\lvert S_{21e}\rvert^2$	$V_{CE}=10$V, $I_C=20$mA, f=800MHz	8.5	11		dB
Power Gain	GUM	$V_{CE}=10$V, $I_C=20$mA, f=800MHz	10	12		dB
Noise Figure	NF	$V_{CE}=10$ V, $I_C=5$ mA, f=800MHz		1.8	3	dB
Second Inter Modulation Distortion	IM_2	$V_{CE}=10$ V, $I_C=20$ mA, $f_1=200$ MHz $f_2=500$ MHz, $V_o=100$ dBμ/75Ω	35	44		dB
Third Inter Modulation Distortion	IM_3	$V_{CE}=10$ V, $I_C=20$ mA, $f_1=600$ MHz $f_2=500$ MHz, $V_o=100$ dBμ/75Ω		56		dB

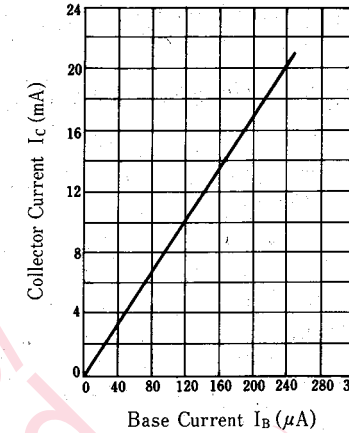
$P_C - Ta$



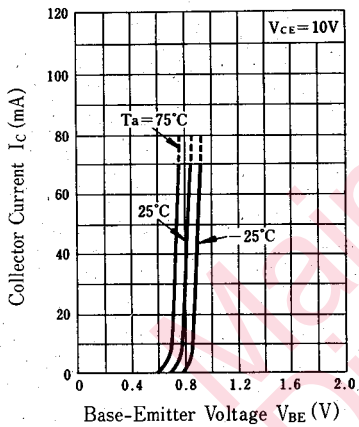
$I_C - V_{CE}$



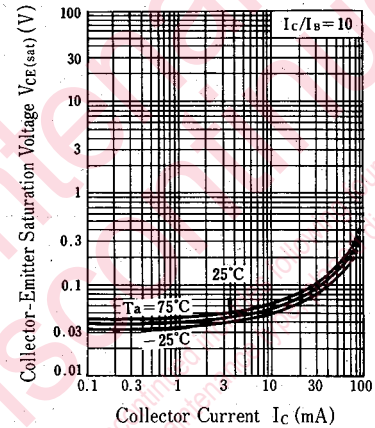
$I_C - I_B$



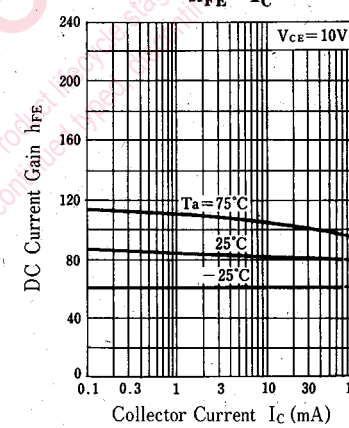
$I_C - V_{BE}$



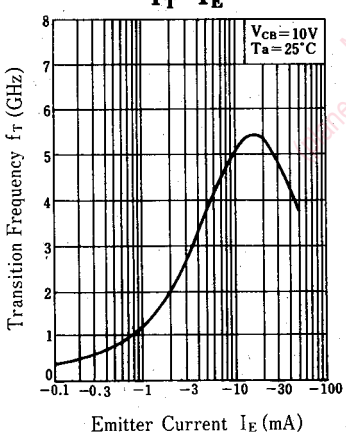
$V_{CE(sat)} - I_C$



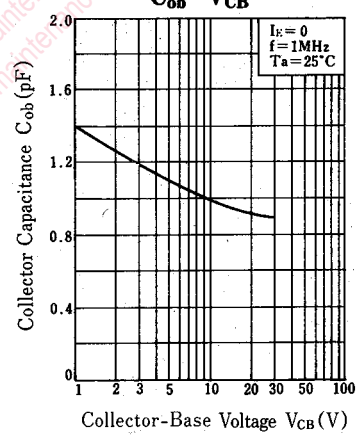
$h_{FE} - I_C$



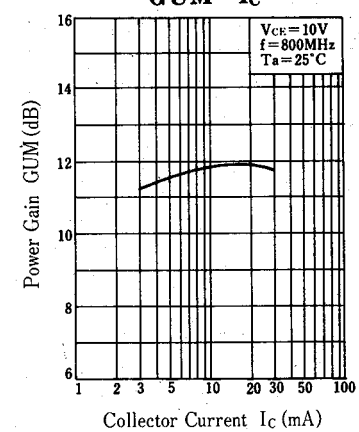
$f_T - I_E$



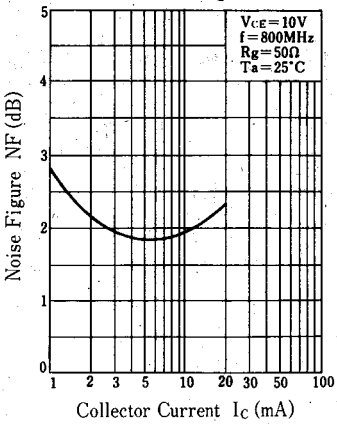
$C_{ob} - V_{CB}$



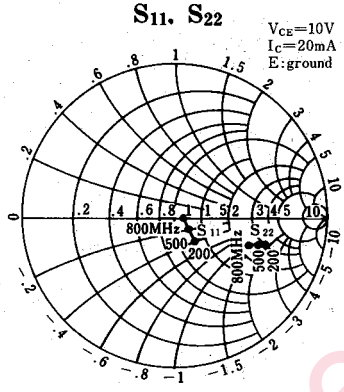
GUM − I_C



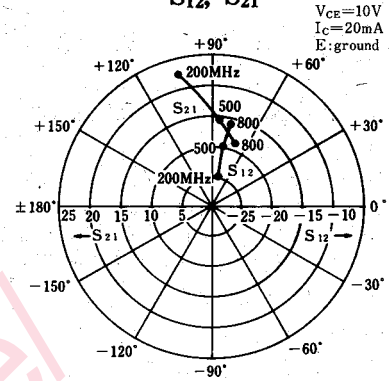
NF – I_C



S_{11}, S_{22}



S_{12}, S_{21}



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