

# 2SC3707

## Silicon NPN epitaxial planer type

For UHF amplification

### Features

- Possible with the small current and low voltage.
- High transition frequency  $f_T$ .
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

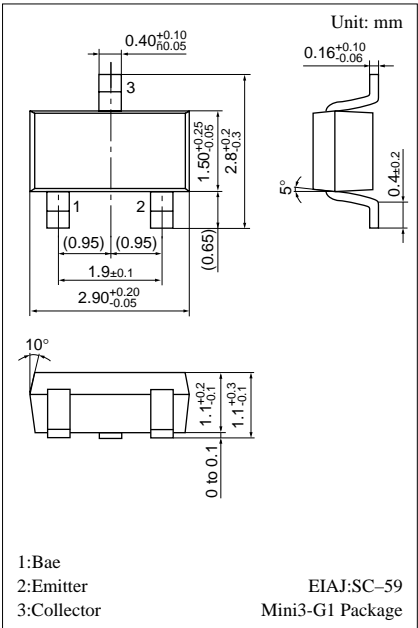
### Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	10	V
Collector to emitter voltage	$V_{CEO}$	7	V
Emitter to base voltage	$V_{EBO}$	2	V
Collector current	$I_C$	10	mA
Collector power dissipation	$P_C$	50	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 ~ +150	°C

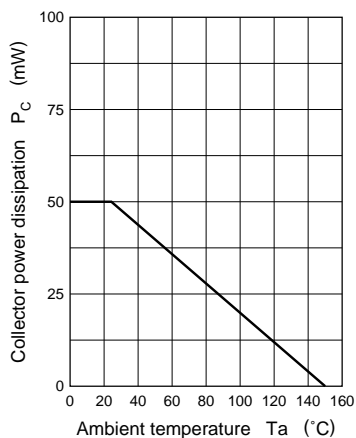
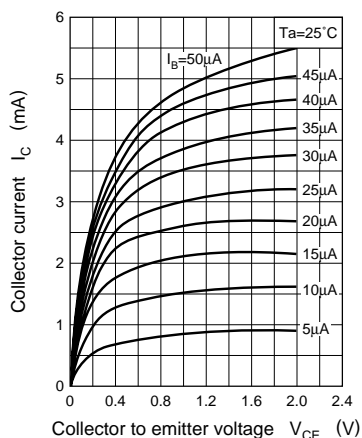
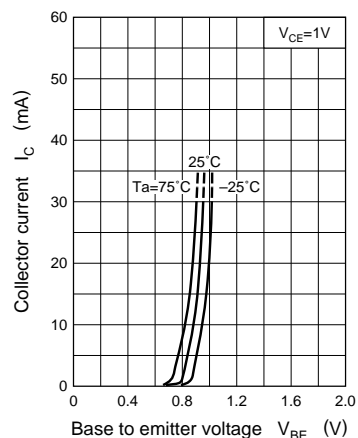
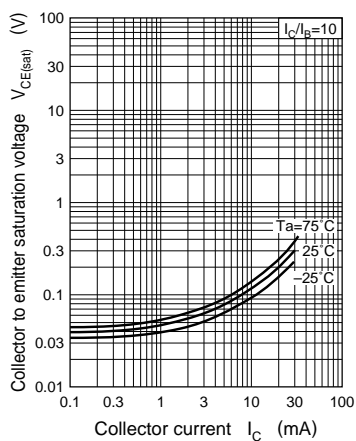
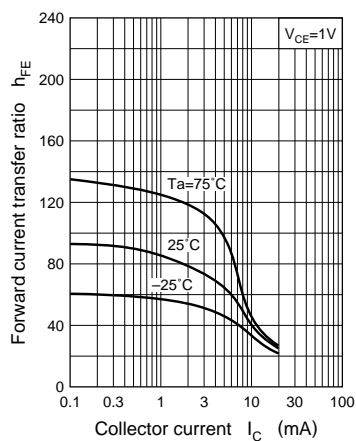
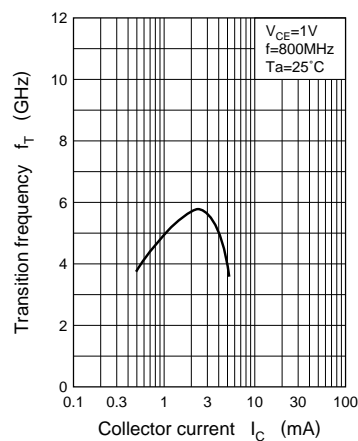
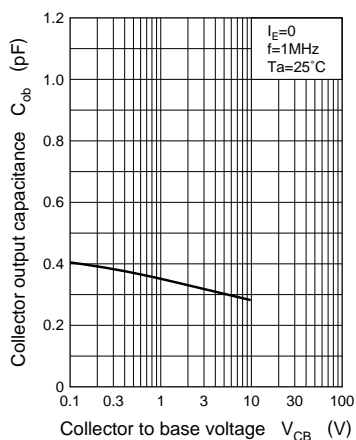
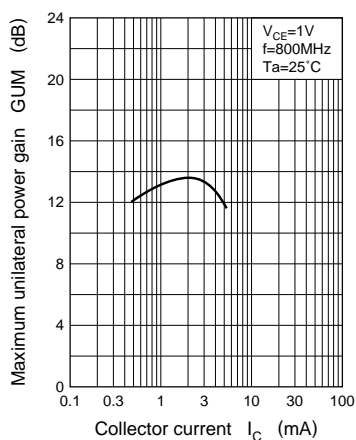
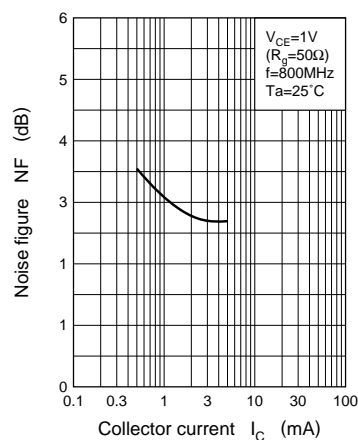
### Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 10V, I_E = 0$			1	nA
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 1.5V, I_C = 0$			1	μA
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 1V, I_C = 1mA$	50	100	150	
Transition frequency	$f_T$	$V_{CE} = 1V, I_C = 1mA, f = 800MHz$		4		GHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 1V, I_E = 0, f = 1MHz$		0.4		pF
Foward transfer gain	$ S_{21e} ^2$	$V_{CE} = 1V, I_C = 1mA, f = 800MHz$		6		dB
Maximum unilateral power gain	GUM	$V_{CE} = 1V, I_C = 1mA, f = 800MHz$		15		dB
Noise figure	NF	$V_{CE} = 1V, I_C = 1mA, f = 800MHz$		3.5		dB

Note: Handle the product with care because this is sensitive to the electrostatic breakdown by its structure.



Marking symbol : 2X

$P_C - T_a$  $I_C - V_{CE}$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_C$  $C_{ob} - V_{CB}$  $GUM - I_C$  $NF - I_C$ 

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