

2SC3707

Silicon NPN epitaxial planer type

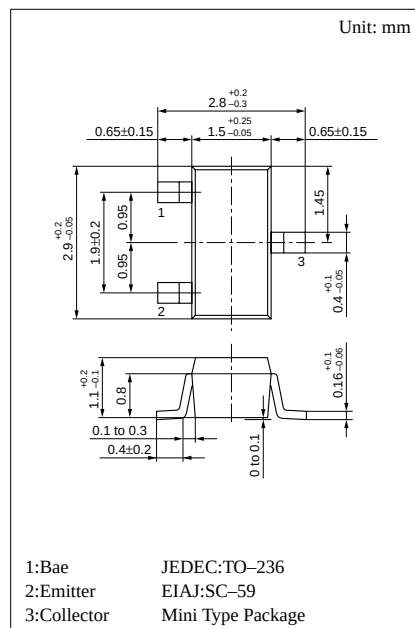
For UHF amplification

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

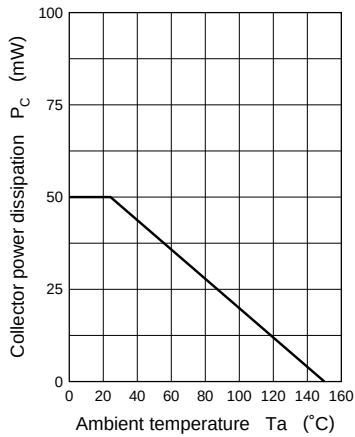
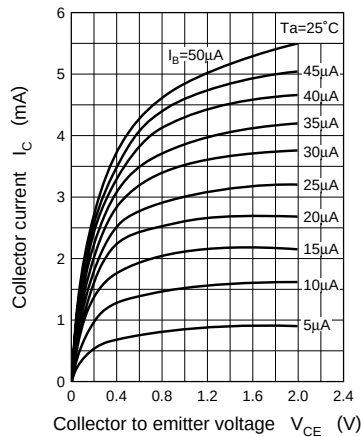
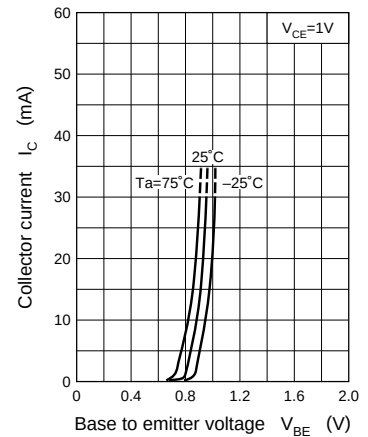
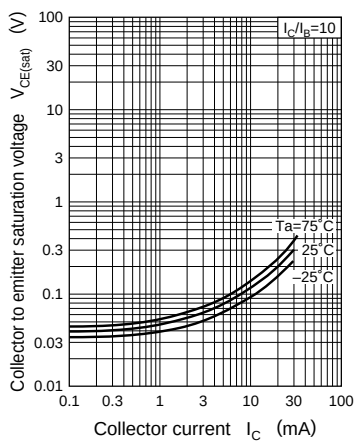
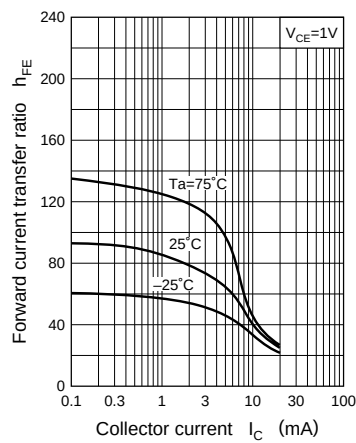
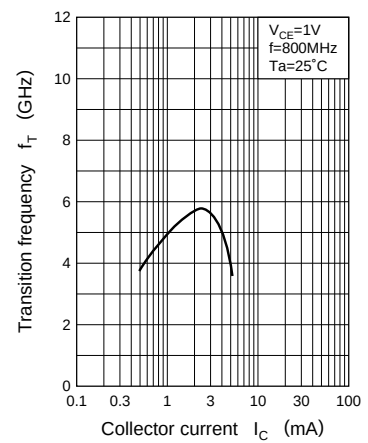
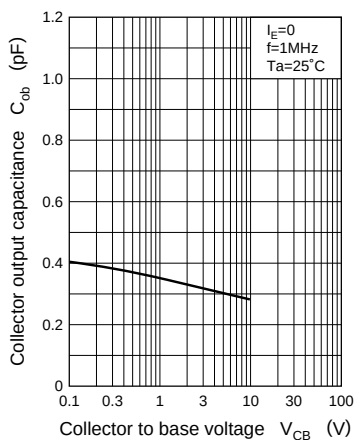
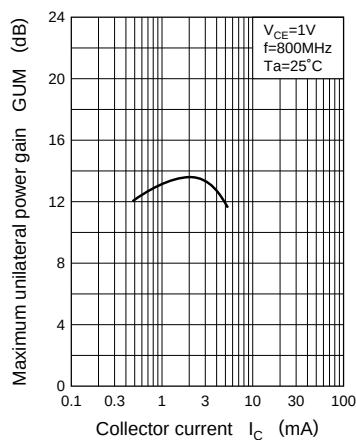


Marking symbol : 2X

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.

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