

2SC3077

Silicon NPN planer type

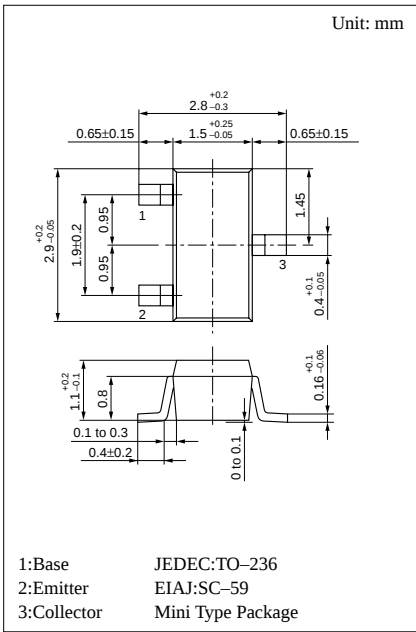
For UHF amplification/mixing

Features

- High power gain PG.
- 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)

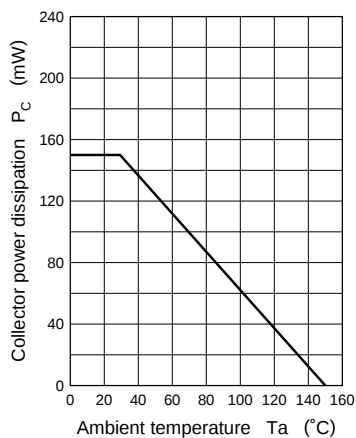
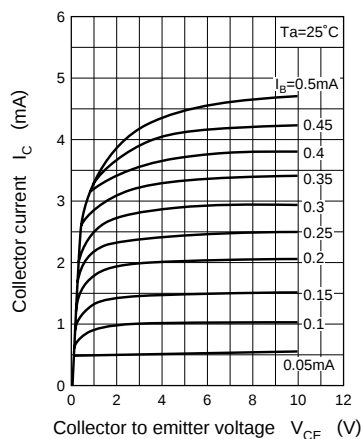
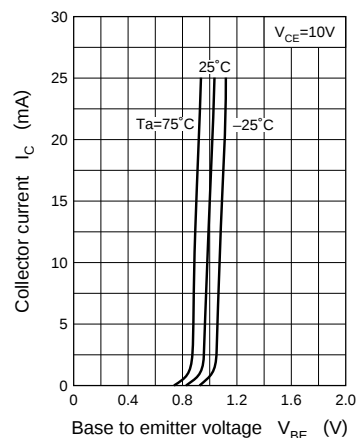
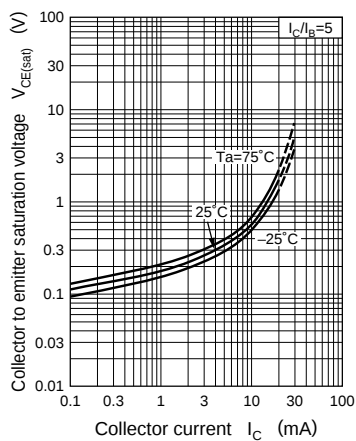
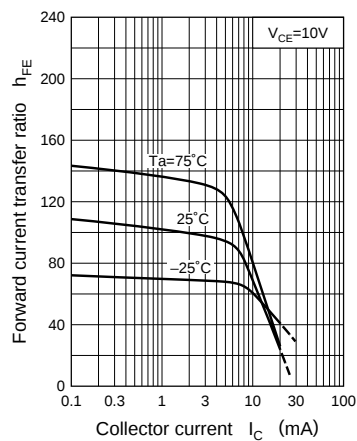
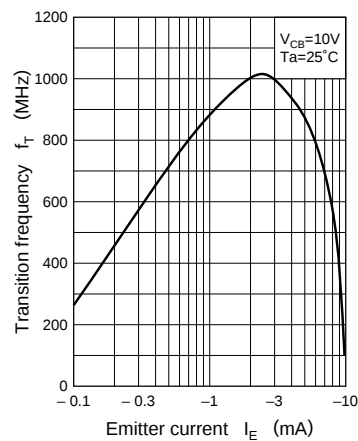
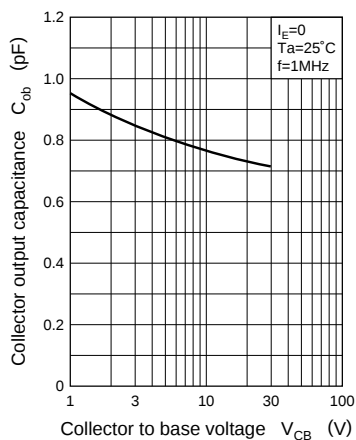
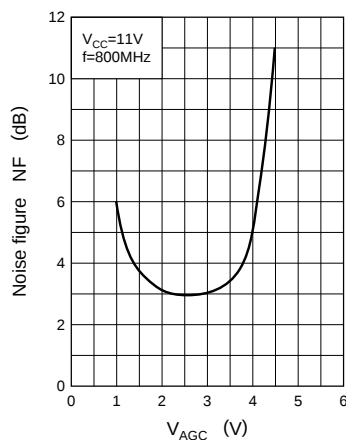
Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	20	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	20	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 ~ +150	°C



Marking symbol : 1T

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 25V, I_E = 0$			1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 3V, I_C = 0$			10	μA
Forward current transfer ratio	h_{FE1}	$V_{CB} = 10V, I_E = -3mA$	40		200	
	h_{FE2}	$V_{CB} = 10V, I_E = -10mA$	40		200	
Transition frequency	f_T	$V_{CB} = 10V, I_E = -3mA, f = 200MHz$	750	1100	1400	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$		0.7		pF
Common emitter reverse transfer capacitance	C_{rb}	$V_{CB} = 10V, I_E = 0, f = 1MHz$		0.15		pF
Power gain	PG	$V_{CC} = 11V, V_{AGC} = 3V, f = 800MHz$	14			dB
Noise figure	NF	$V_{CC} = 11V, V_{AGC} = 3V, f = 800MHz$			5	dB

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