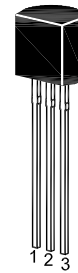


# 2SC1907

## NPN Silicon Epitaxial Planar Transistor

for UHF TV Tuner and Local Oscillator.

On special request, these transistors can be manufactured in different pin configurations.



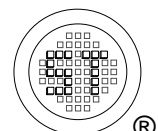
1. Emitter 2. Collector 3. Base  
TO-92 Plastic Package

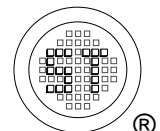
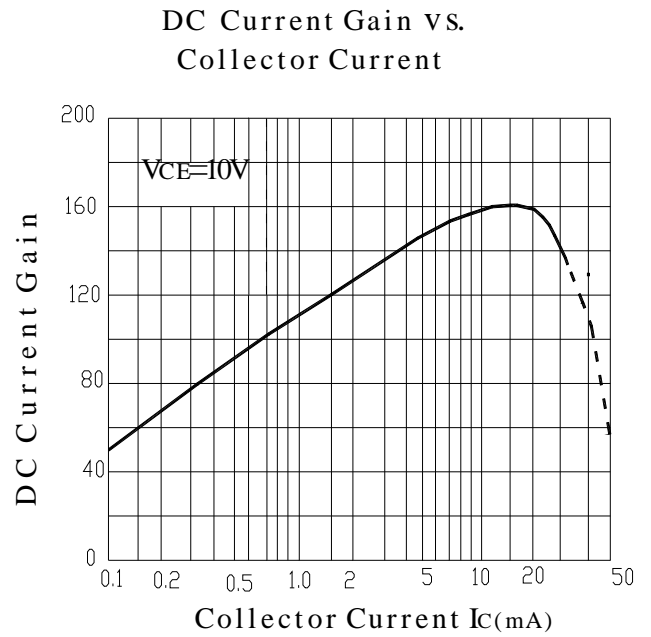
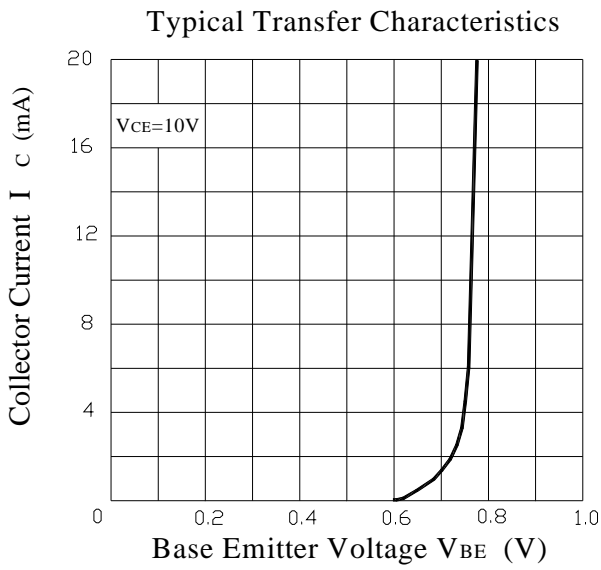
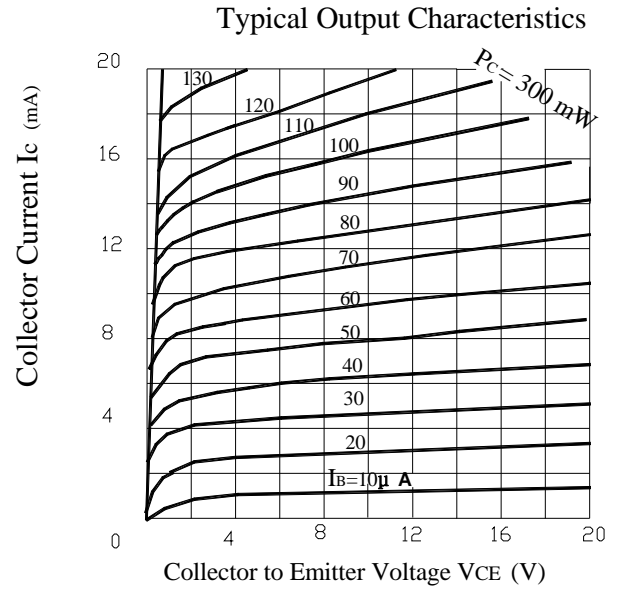
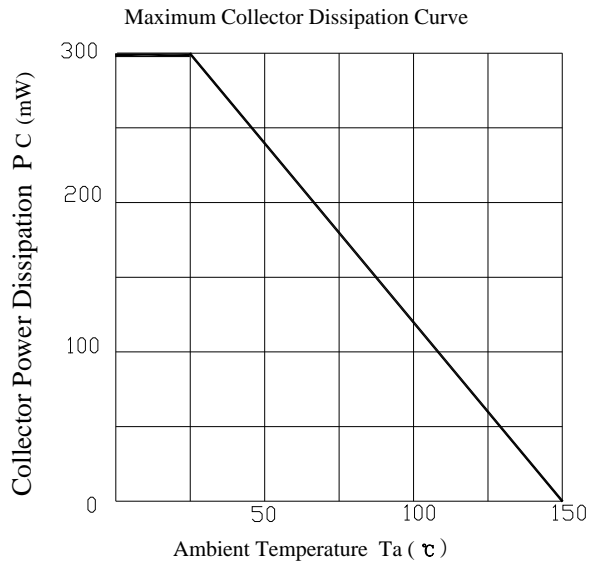
### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	30	V
Collector Emitter Voltage	$V_{CEO}$	19	V
Emitter Base Voltage	$V_{EBO}$	2	V
Collector Current	$I_C$	50	mA
Emitter Current	$-I_E$	50	mA
Power Dissipation	$P_{tot}$	300	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

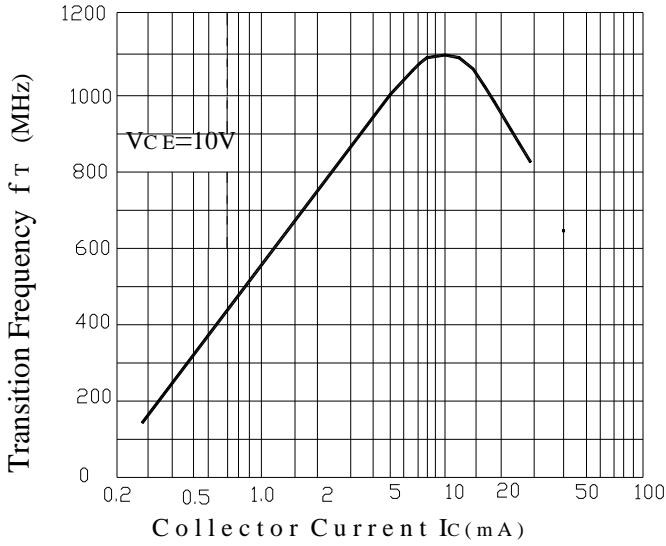
### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 10\text{ V}$ , $I_C = 10\text{ mA}$	$h_{FE}$	40	-	-	-
Collector Base Cutoff Current at $V_{CB} = 10\text{ V}$	$I_{CBO}$	-	-	0.5	$\mu\text{A}$
Collector Base Breakdown voltage at $I_C = 10\text{ }\mu\text{A}$	$V_{(BR)CBO}$	30	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 3\text{ mA}$	$V_{(BR)CEO}$	19	-	-	V
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	2	-	-	V
Collector Emitter Saturation Voltage at $I_C = 20\text{ mA}$ , $I_B = 4\text{ mA}$	$V_{CE(sat)}$	-	0.2	1	V
Transition Frequency at $V_{CE} = 10\text{ V}$ , $I_C = 10\text{ mA}$	$f_T$	900	1100	-	MHz
Collector Output Capacitance at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{OB}$	-	1	2	pF
Base Time Constant at $V_{CB} = 10\text{ V}$ , $I_C = 10\text{ mA}$ , $f = 31.8\text{ MHz}$	$r_{bb'} \cdot C_c$	-	10	25	ps
Oscillation Output Power at $V_{CB} = 10\text{ V}$ , $I_C = 10\text{ mA}$ , $f = 930\text{ MHz}$	$P_{out}$	-	8	-	mW

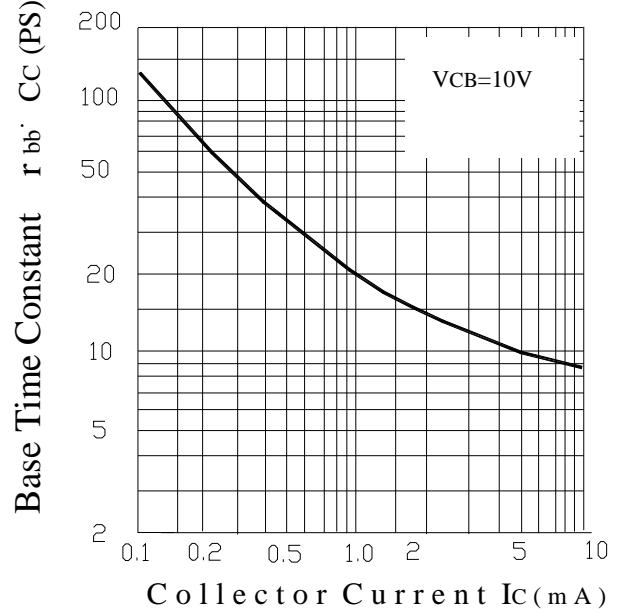




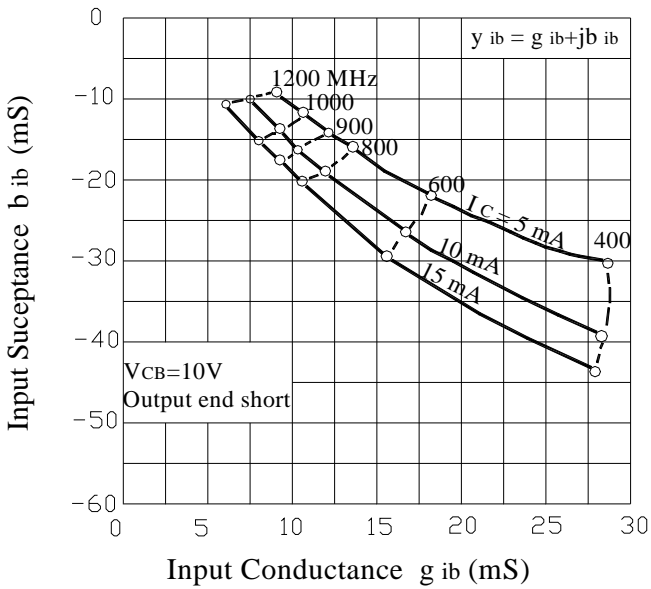
Transition Frequency vs. Collector Current



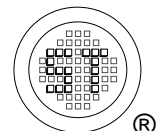
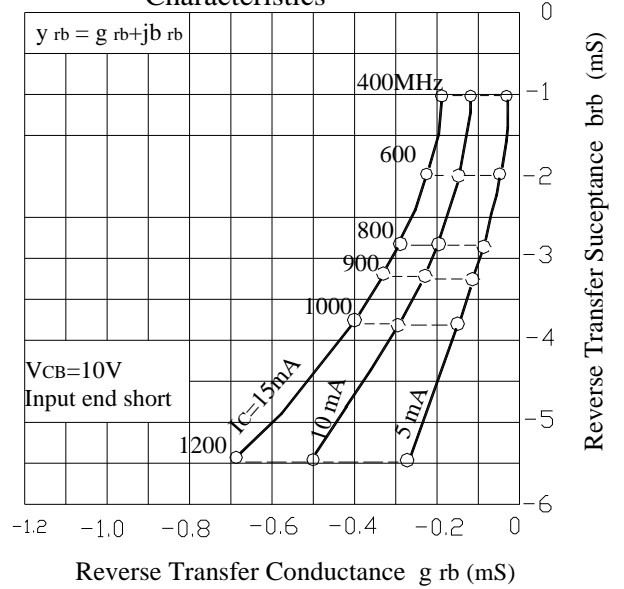
Base Time Constant vs Collector Current



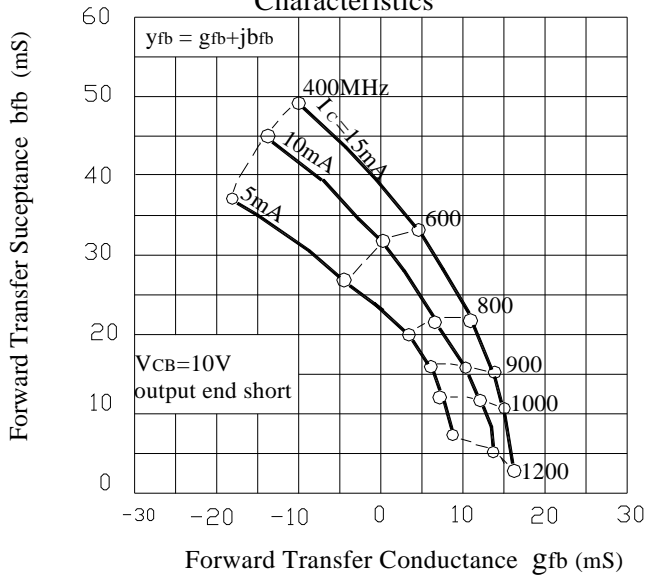
Input Admittance Characteristics



Reverse Transfer Admittance Characteristics



Forward Transfer Admittance Characteristics



Output Admittance Characteristics

