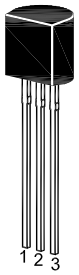
ST 2SC1907

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

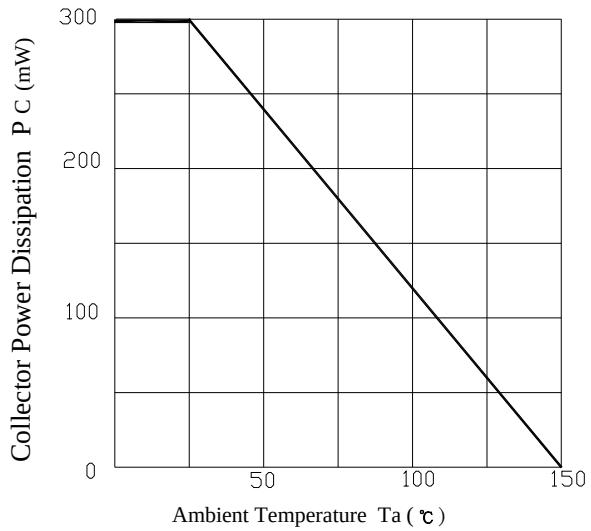
Absolute Maximum Ratings (T_a = 25 °C)

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	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

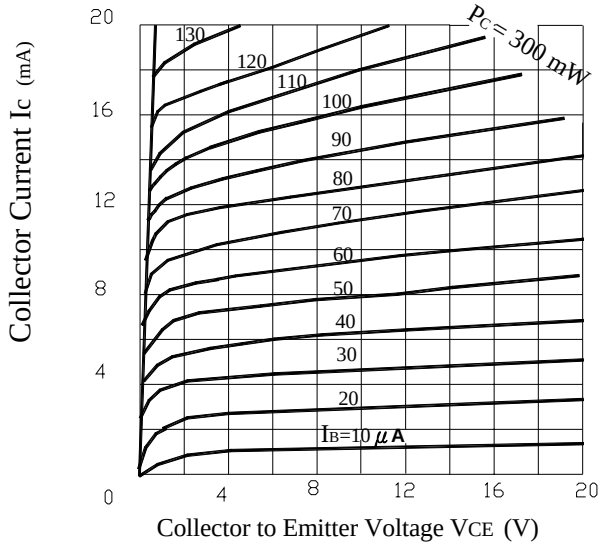
Characteristics at T_a = 25 °C

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

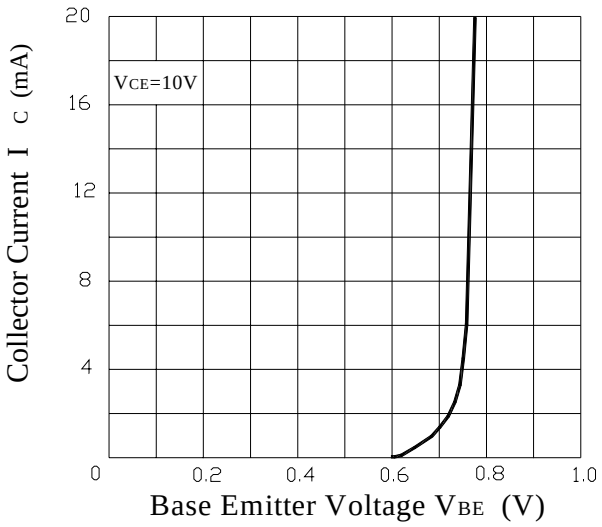
Maximum Collector Dissipation Curve



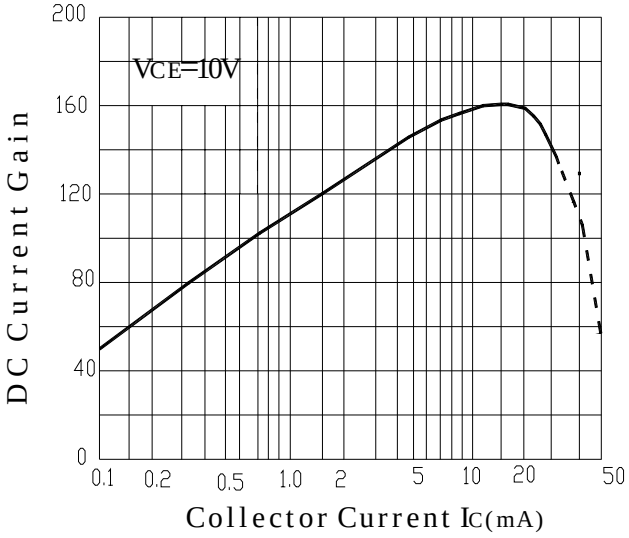
Typical Output Characteristics



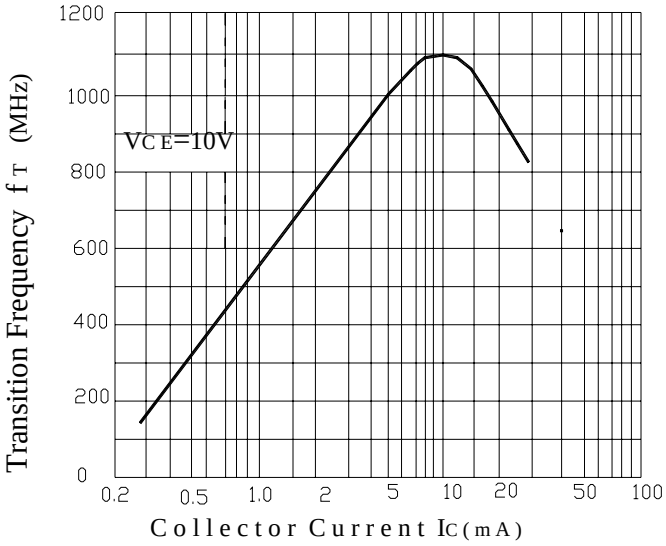
Typical Transfer Characteristics



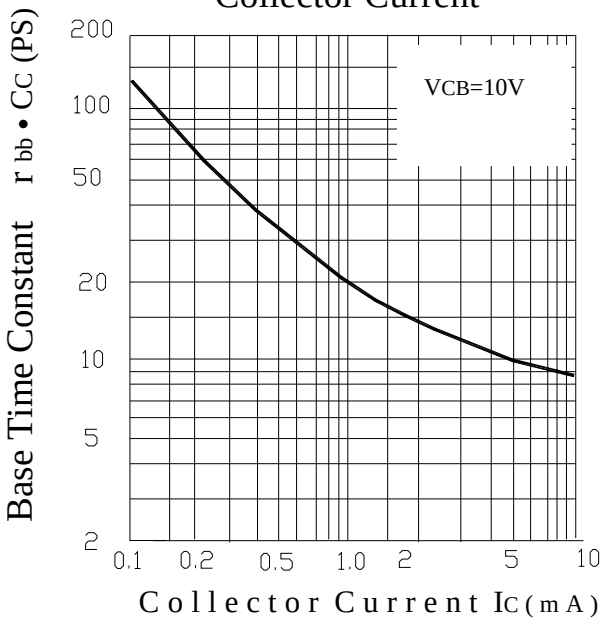
DC Current Gain vs. Collector Current



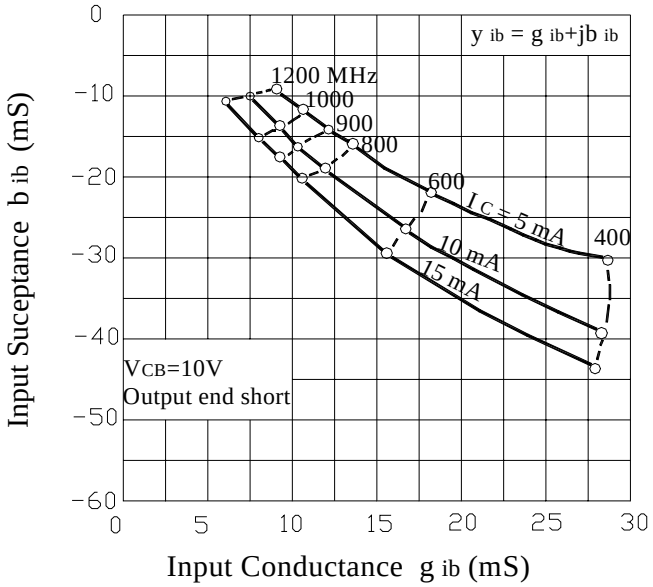
Transition Frequency vs.
Collector Current



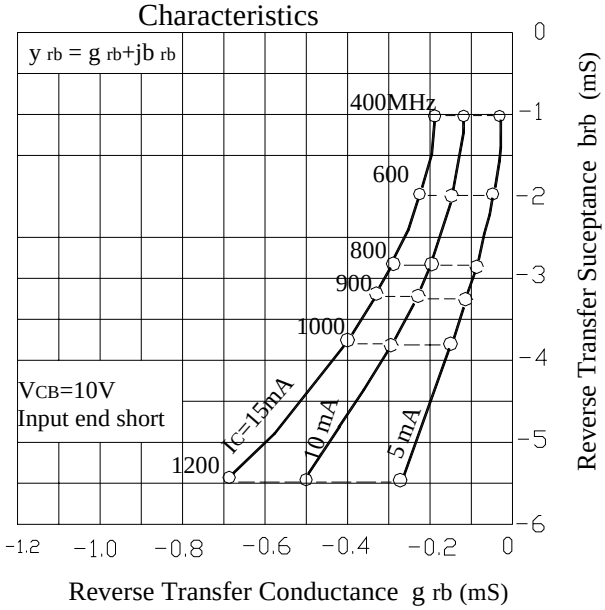
Base Time Constant vs
Collector Current



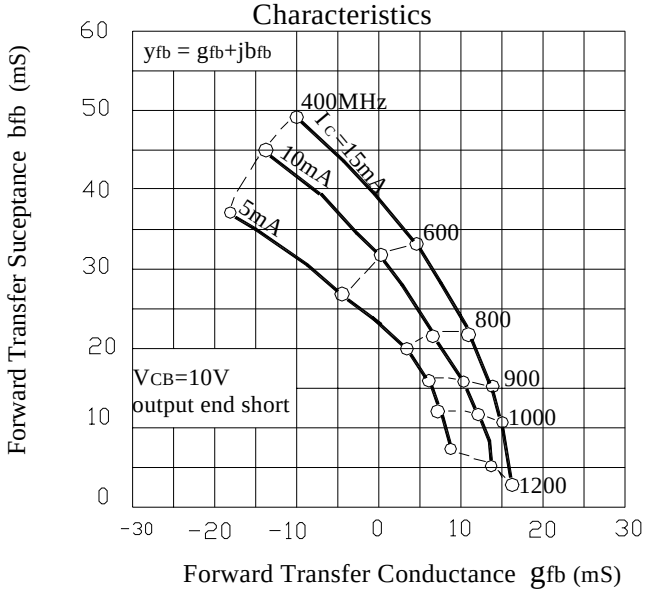
Input Admittance Characteristics



Reverse Transfer Admittance
Characteristics



Forward Transfer Admittance Characteristics



Output Admittance Characteristics