

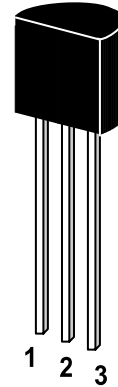
# ST 2SC1907

## NPN Silicon Epitaxial Planar Transistor

for UHF TV Tuner and Local Oscillator.

The transistor is subdivided into one group, according to its DC current gain.

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



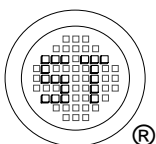
1. Emitter 2. Collector 3. Base

TO-92 Plastic Package

Weight approx. 0.19g

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

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



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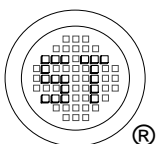


Dated : 07/12/2002

# ST 2SC1907

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

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE}=10\text{V}$ , $I_C=10\text{mA}$ Current Gain Group	$h_{FE}$	40	-	-	-
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 Cutoff Current at $V_{CB}=10\text{V}$	$I_{CBO}$	-	-	0.5	$\mu\text{A}$
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



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ISO/TS 16949 : 2002  
Certificate No. 05103

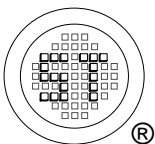
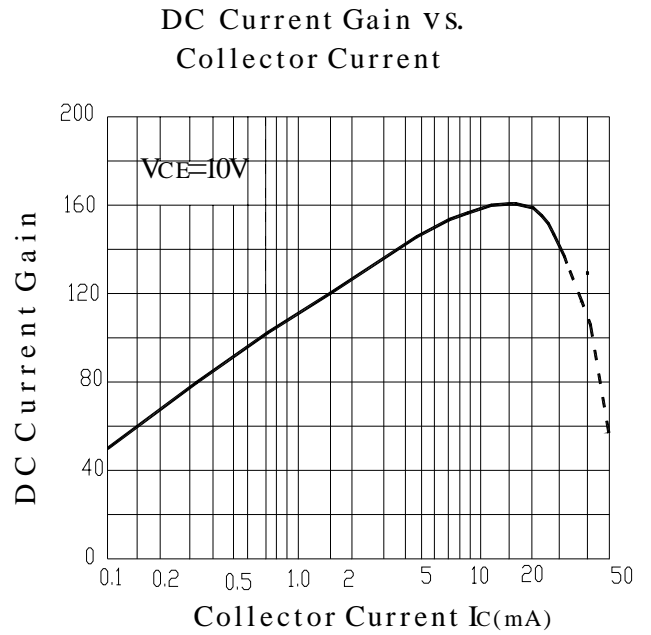
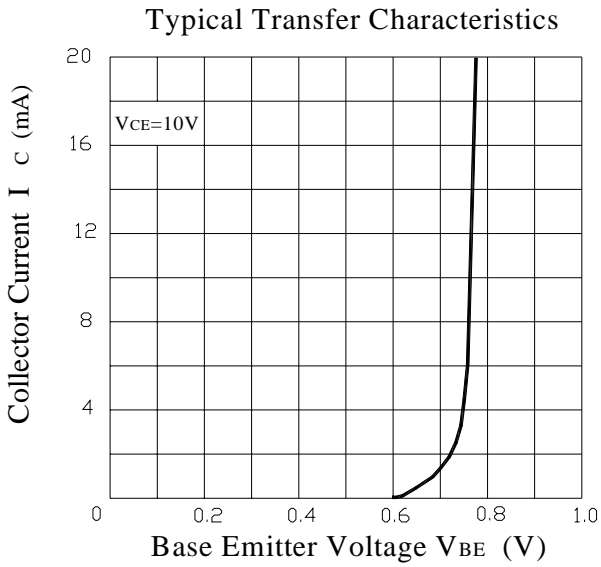
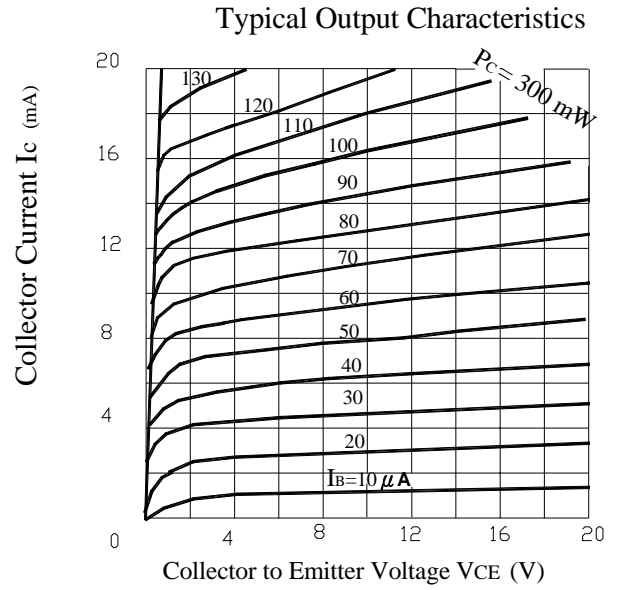
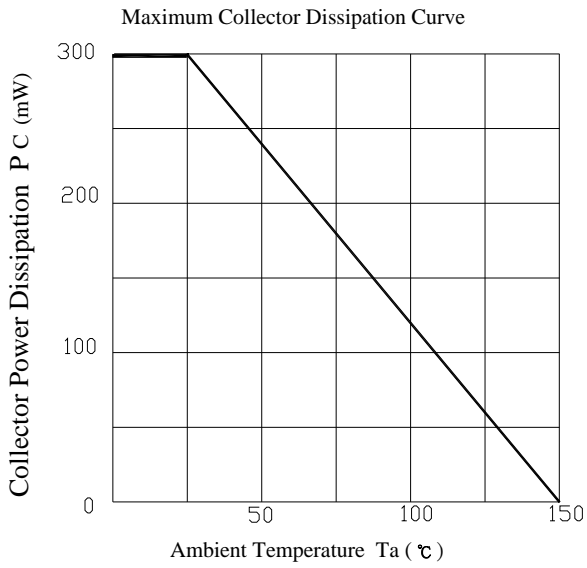


ISO 14001:2004  
Certificate No. 7116

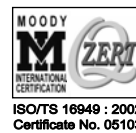


ISO 9001:2000  
Certificate No. 0506098

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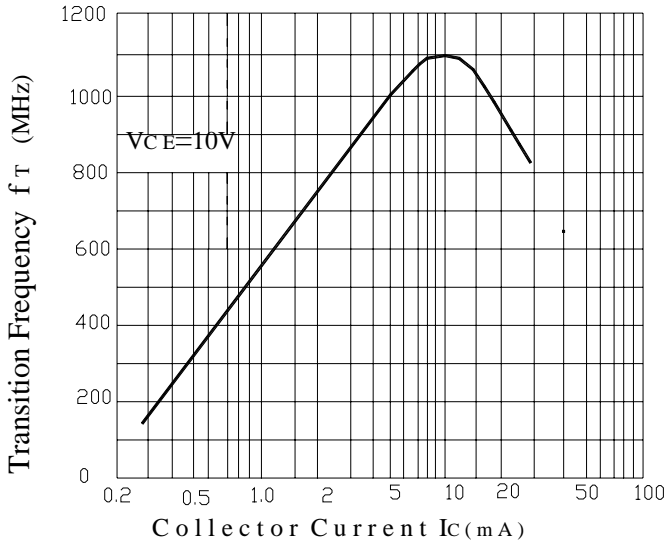


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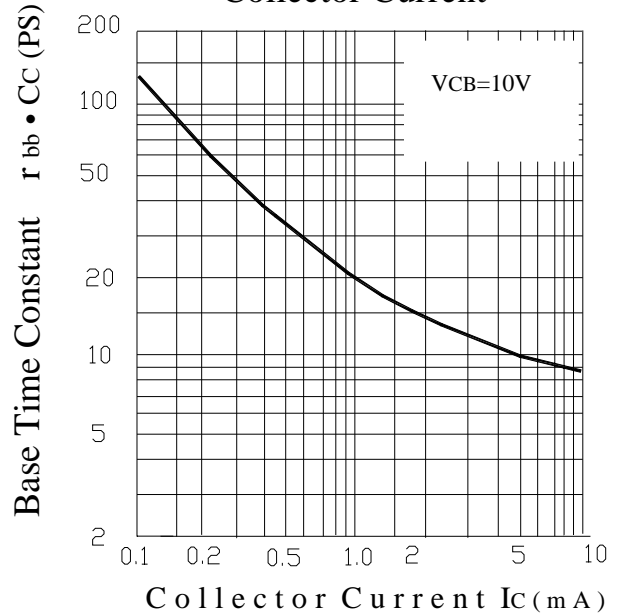


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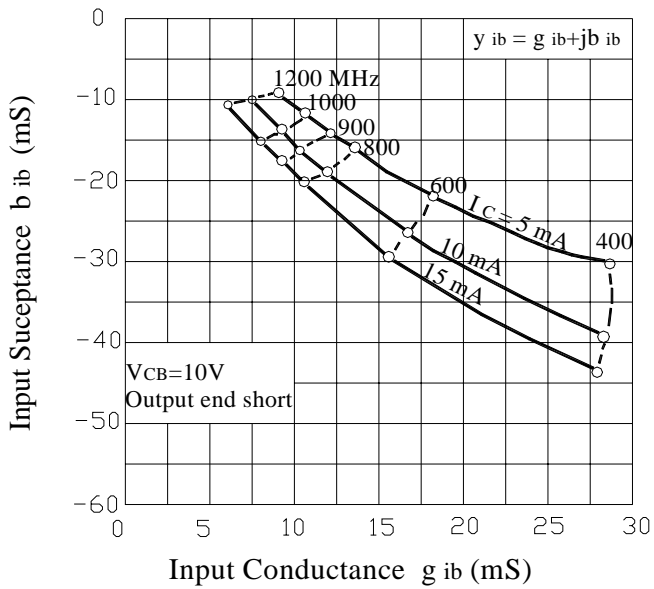
Transition Frequency vs. Collector Current



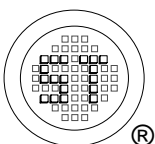
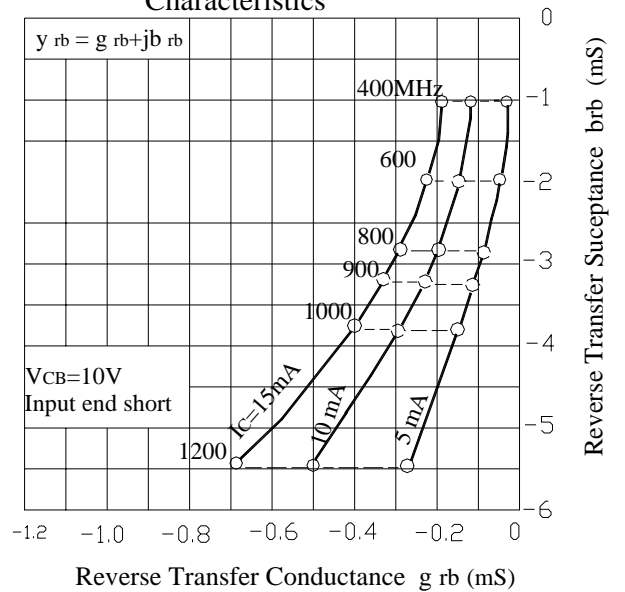
Base Time Constant vs. Collector Current



Input Admittance Characteristics



Reverse Transfer Admittance Characteristics



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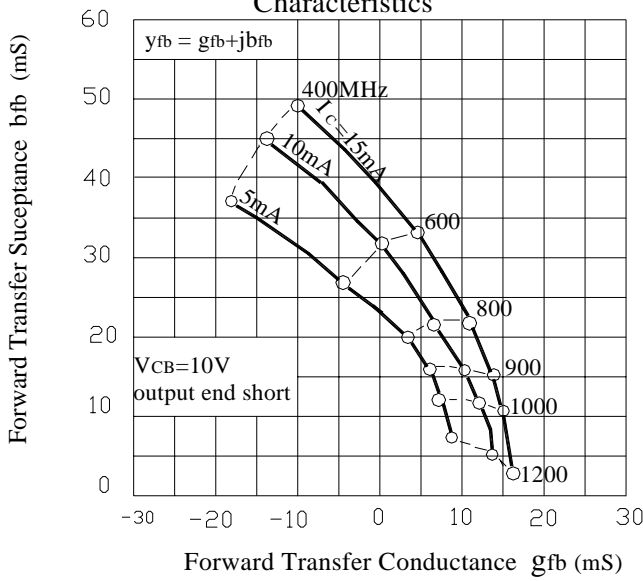
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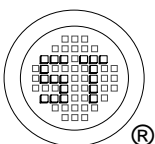
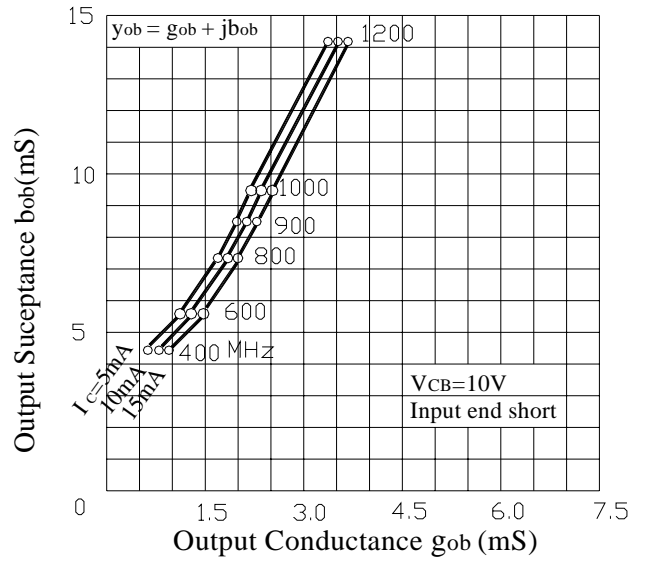
ISO/TS 16949 : 2002 Certificate No. 05103  
ISO 14001:2004 Certificate No. 7116  
ISO 9001:2000 Certificate No. 050698

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### Forward Transfer Admittance Characteristics



### Output Admittance Characteristics



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