



FUKUCOM COMPANY LTD.

福靈有限公司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314 FAX: 852-2790 0206

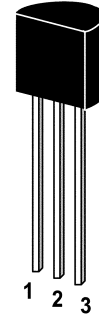
ST 2SC1907

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.



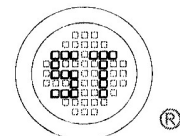
1. Emitter 2. Collector 3. Base

TO-92 Plastic Package

Weight approx. 0.19g

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

| | Symbol | Value | Unit |
|---------------------------|-----------|-------------|------------------|
| Collector Base Voltage | V_{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_s | -55 to +150 | $^\circ\text{C}$ |



SEMTECH

Dated : 07/12/2002



FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

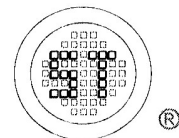
FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314 FAX: 852-2790 0206

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 | μA |
| 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 $V_{CB}=10\text{V}$, $I_C=10\text{mA}$ $f=31.8\text{ MHz}$ | $\tau_{bb'} \cdot C_c$ | - | 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 |



SEMTECH

Dated : 07/12/2002



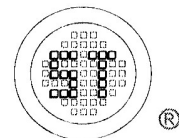
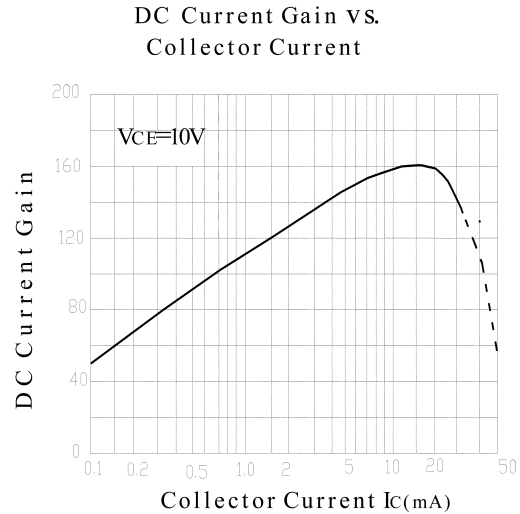
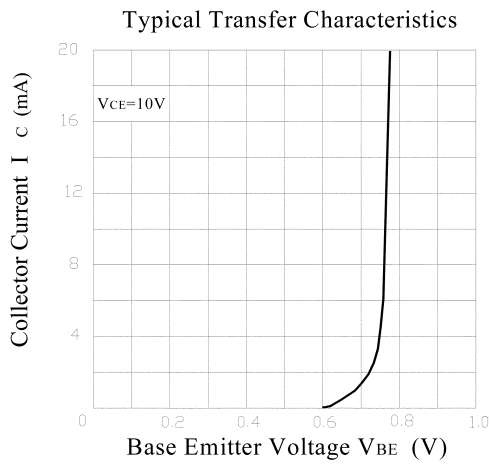
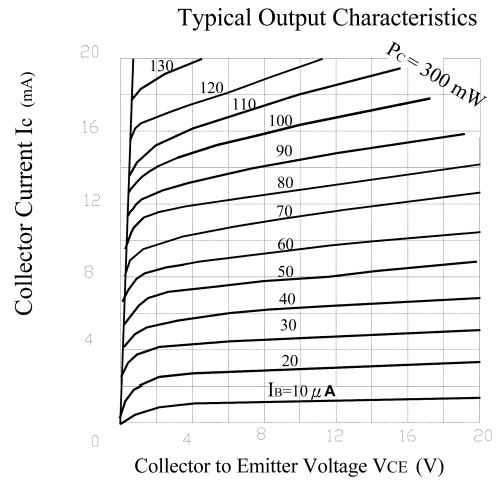
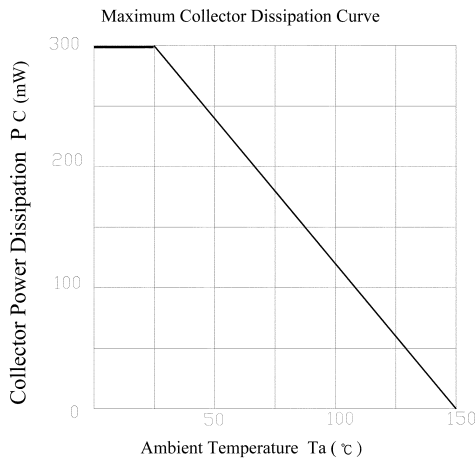
FUKUCOM COMPANY LTD.

福靈有限公司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314 FAX: 852-2790 0206

ST 2SC1907



SEMTECH

Dated : 07/12/2002



FUKUCOM COMPANY LTD.

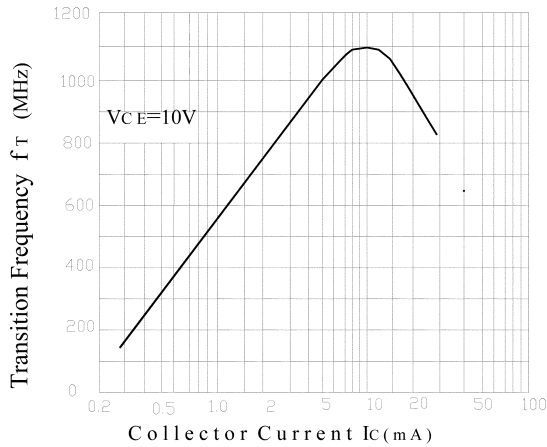
福靈有限公司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.

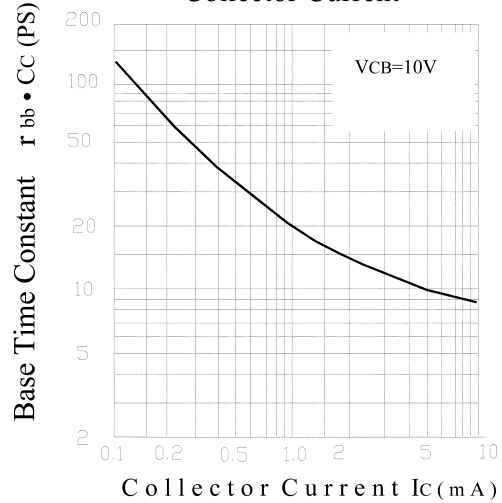
TEL: 852-2790 0314 FAX: 852-2790 0206

ST 2SC1907

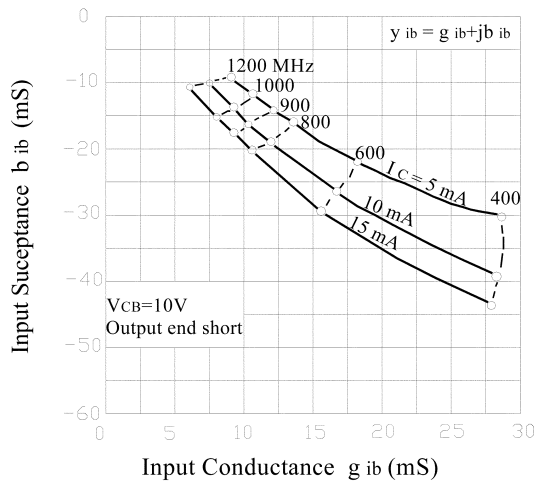
Transition Frequency vs. Collector Current



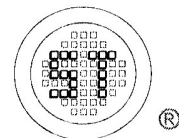
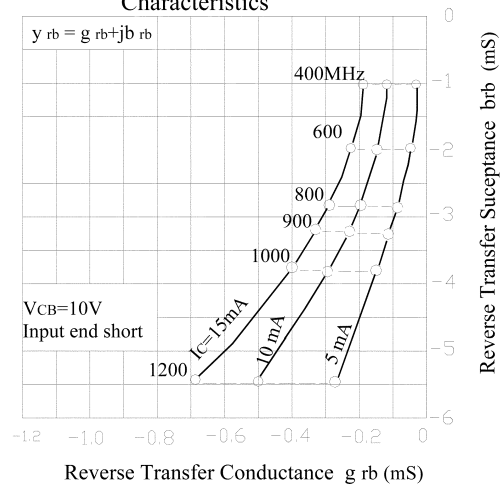
Base Time Constant vs Collector Current



Input Admittance Characteristics



Reverse Transfer Admittance Characteristics



SEMTECH

Dated : 07/12/2002



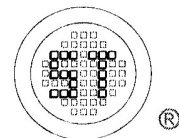
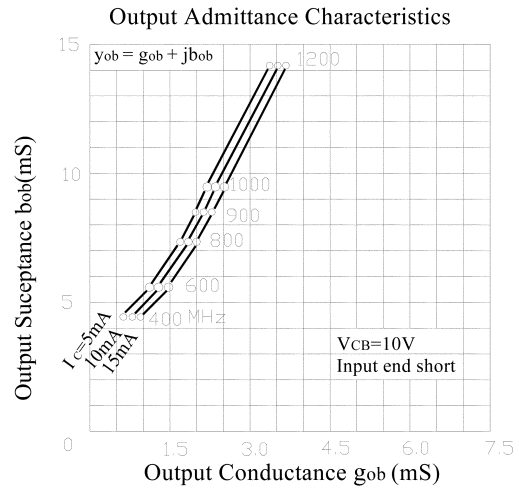
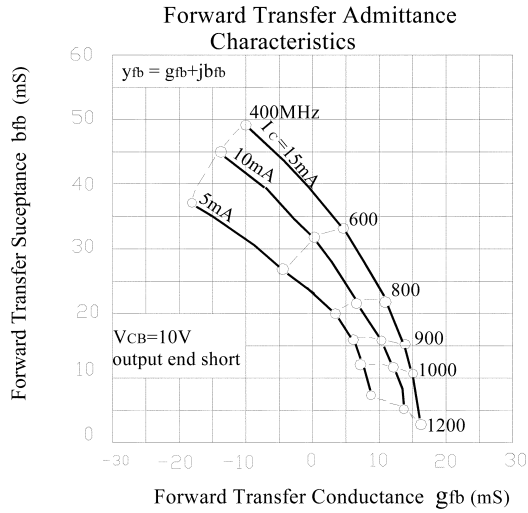
FUKUCOM COMPANY LTD.

福靈有限公司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314 FAX: 852-2790 0206

ST 2SC1907



SEMTECH

Dated : 07/12/2002