

Description

- Digital transistor

Features

- Two SRC1211 chips in SOT-563F package
- With built-in bias resistors

Ordering Information

| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| SUR541EF | JW | SOT-563F |

Outline Dimensions

unit : mm

The technical drawing includes three main parts:

- Top View:** Shows a rectangular package with dimensions: width 1.6 ± 0.1 mm, height 1.0 ± 0.05 mm, and a central area width of 1.2 ± 0.05 mm. Pin locations are numbered 1 through 6.
- Side View:** Shows the package height as $0.56 \sim 0.6$ mm, a top thickness of $0 \sim 0.1$ mm, and a lead thickness of 0.11 Typ.
- Circuit Diagram:** Shows two NPN transistors, Tr1 and Tr2, with base resistors R1. The connections are: Pin 1 (Emitter 1), Pin 2 (Base 1), Pin 3 (Collector 2), Pin 4 (Emitter 2), Pin 5 (Base 2), and Pin 6 (Collector 1).

| | |
|-----|--------------|
| | R_1 |
| Tr1 | 10K Ω |
| Tr2 | 10K Ω |

PIN Connections

1. Emitter 1
2. Base 1
3. Collector 2
4. Emitter 2
5. Base 2
6. Collector 1

Absolute maximum ratings (Tr1, Tr2)

Ta=25°C

| Characteristic | Symbol | Ratings | Unit |
|---------------------------|-----------|-----------|------|
| Collector-Base Voltage | V_{CBO} | 50 | V |
| Collector-Emitter Voltage | V_{CEO} | 50 | |
| Emitter-Base Voltage | V_{EBO} | 5 | V |
| Collector Current | I_C | 100 | mA |
| Power Dissipation | P_D | 100 | mW |
| Junction Temperature | T_J | 150 | °C |
| Storage Temperature | T_{STG} | -55 ~ 150 | °C |

Electrical Characteristics(Tr1, Tr2 : NPN)

Ta=25°C

| Characteristic | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|--------------------------------------|---------------|-----------------------|------|------|------|------|
| Collector Cut-off Current | I_{CBO} | $V_{CB}=50V, I_E=0$ | - | - | 500 | nA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB}=5V, I_C=0$ | - | - | 500 | nA |
| DC Current Gain | h_{FE} | $V_{CE}=5V, I_C=1mA$ | 120 | - | - | - |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_C=10mA, I_B=0.5mA$ | - | 0.1 | 0.3 | V |
| Transition Frequency | f_T^* | $V_{CE}=10V, I_C=5mA$ | - | 250 | - | MHz |
| Input Resistance | R_1 | - | - | 10 | - | KΩ |
| Collector Cut-off Current | I_{CBO} | $V_{CB}=50V, I_E=0$ | - | - | 500 | nA |

* : Characteristic of Transistor Only

Electrical Characteristic Curves

Tr1, Tr2 : NPN

Fig. 1 $h_{FE} - I_C$

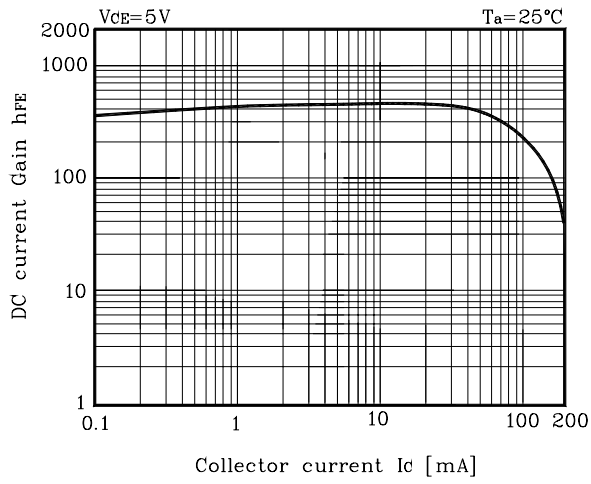
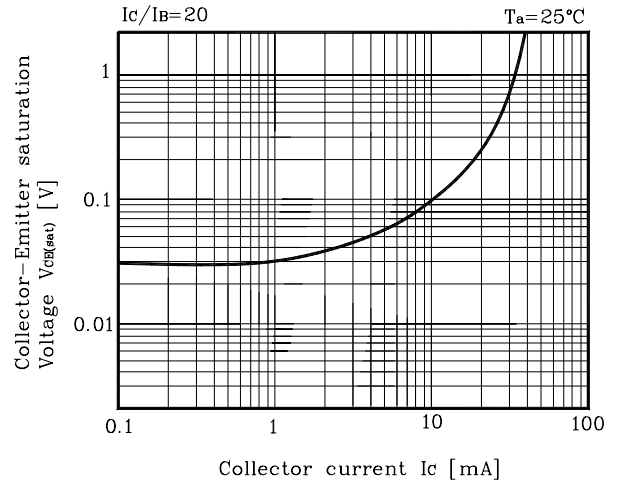


Fig. 2 $V_{CE(SAT)} - I_C$



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