

## Descriptions

- Switching application
- Interface circuit and driver circuit application

## Features

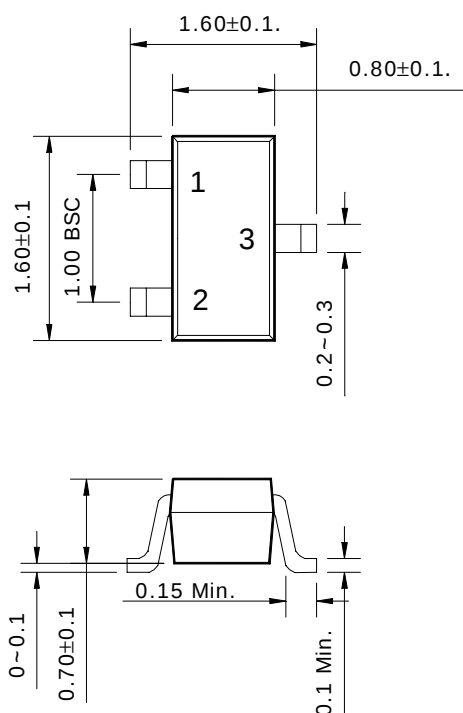
- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- High packing density

## Ordering Information

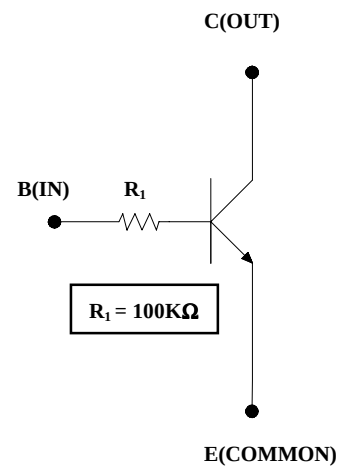
| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| SRC1212E | RB      | SOT-523      |

## Outline Dimensions

unit : mm



### • Equivalent Circuit



### PIN Connections

1. Base
2. Emitter
3. Collector

## Absolute maximum ratings

(Ta=25°C)

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

## Electrical Characteristics

(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                     | $R_1$         | -                     | -    | 100  | -    | KΩ   |

\* : Characteristic of Transistor Only

## Electrical Characteristic Curves

Fig. 1  $h_{FE} - I_C$

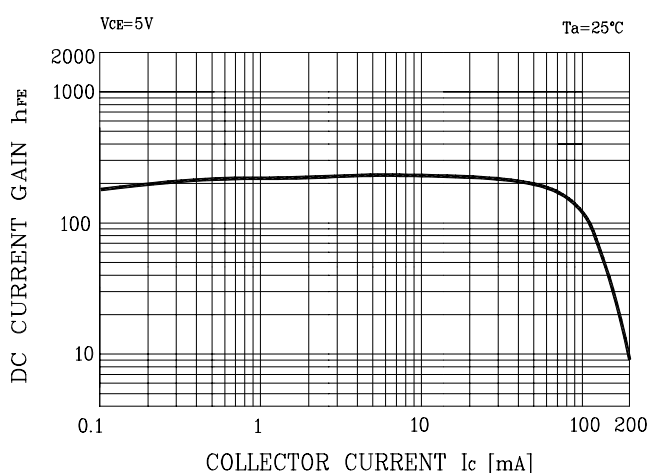


Fig. 2  $V_{CE(SAT)} - I_C$

