

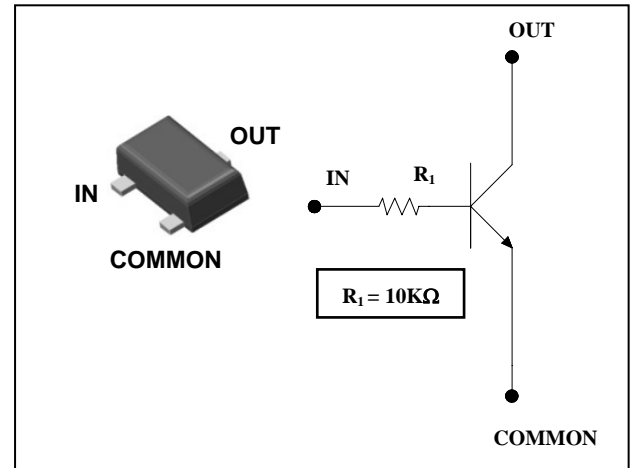
## Descriptions

- Switching application
- Interface circuit and driver circuit application


## Features

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

## PIN Connection



## Ordering Information

| Type NO.  | Marking   | Package Code |
|-----------|---|--------------|
| SRC1211UF | RD <br>① ② | SOT-323F     |

① Device Code ② Year&Week Code

## Absolute Maximum Ratings

(Ta=25°C)

| Characteristic            | Symbol    | Rating    | Unit |
|---------------------------|-----------|-----------|------|
| Output voltage            | $V_O$     | 50        | V    |
| Input voltage             | $V_I$     | 30, -5    | V    |
| Output current            | $I_O$     | 100       | mA   |
| Power dissipation         | $P_D$     | 200       | mW   |
| Junction temperature      | $T_J$     | 150       | °C   |
| Storage temperature range | $T_{stg}$ | -55 ~ 150 | °C   |

## Electrical Characteristics

(Ta=25°C)

| Characteristic                 | Symbol       | Test Condition             | Min. | Typ. | Max. | Unit |
|--------------------------------|--------------|----------------------------|------|------|------|------|
| Output cut-off current         | $I_{O(OFF)}$ | $V_O=50V, V_I=0$           | -    | -    | 500  | nA   |
| DC current gain                | $G_I$        | $V_O=5V, I_O=10mA$         | 120  | -    | -    | -    |
| Output voltage                 | $V_{O(ON)}$  | $I_O=10mA, I_I=0.5mA$      | -    | 0.1  | 0.3  | V    |
| Input voltage (ON)             | $V_{I(ON)}$  | $V_O=0.2V, I_O=5mA$        | -    | 0.9  | 1.4  | V    |
| Input voltage (OFF)            | $V_{I(OFF)}$ | $V_O=5V, I_O=0.1mA$        | 0.3  | 0.55 | -    | V    |
| Transition frequency           | $f_T^*$      | $V_O=10V, I_O=5mA, f=1MHz$ | -    | 200  | -    | MHz  |
| Input current                  | $I_I$        | $V_I=5V, I_O=0$            | -    | -    | 0.88 | mA   |
| Input resistor (Input to base) | $R_1$        | -                          | 7    | 10   | 13   | KΩ   |

\* : Characteristic of transistor only

Electrical Characteristic Curves

Fig. 1  $I_O - V_{I(ON)}$

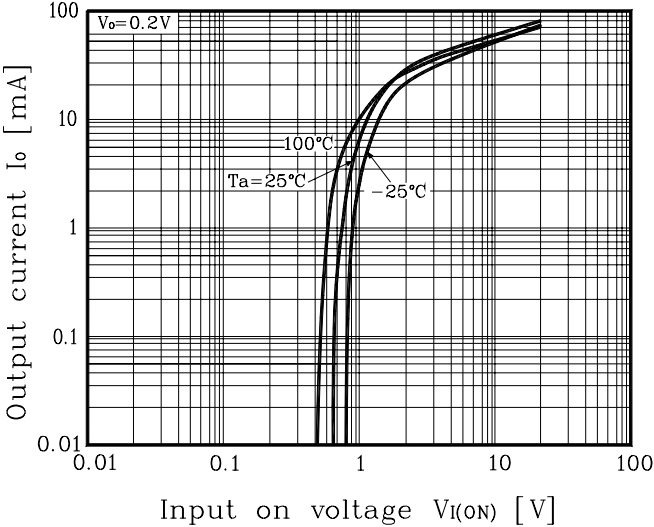


Fig. 2  $I_O - V_{I(OFF)}$

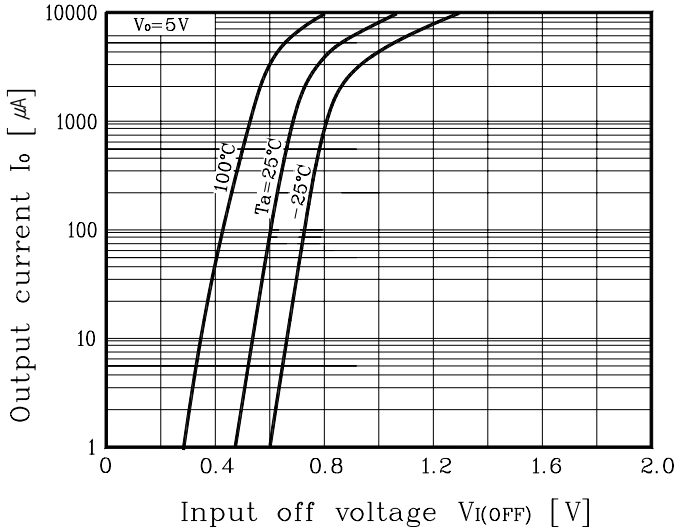
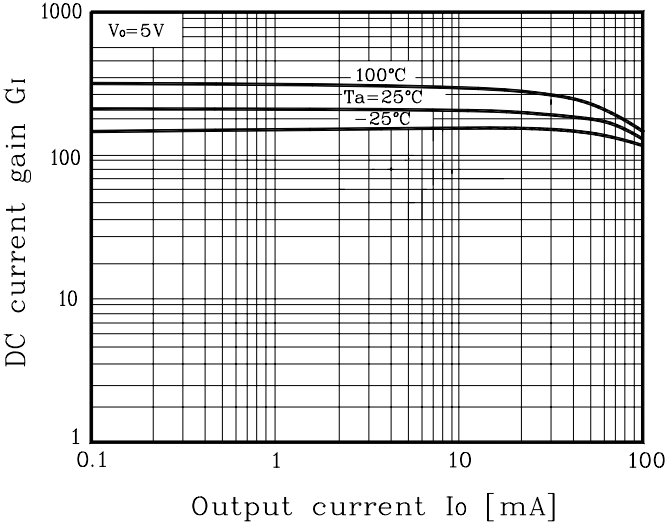
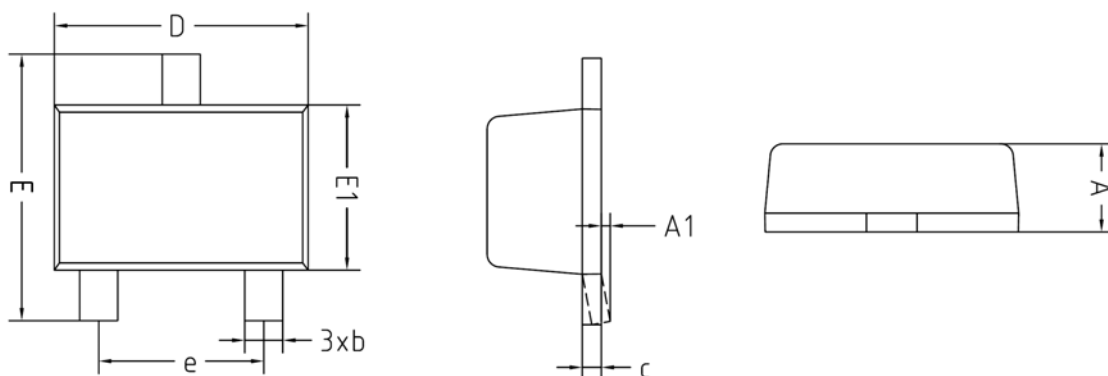


Fig. 3  $G_I - I_O$

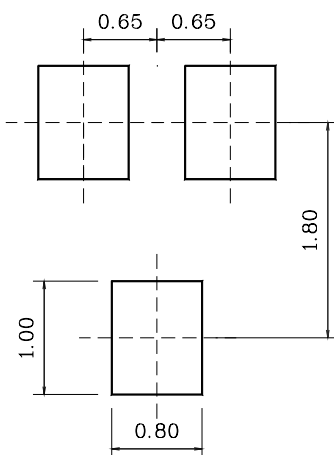


Outline Dimension



| SYMBOL | MILLIMETERS |         |         | NOTE |
|--------|-------------|---------|---------|------|
|        | MINIMUM     | NOMINAL | MAXIMUM |      |
| A      | 0.60        | -       | 0.80    |      |
| A1     | 0.00        | -       | 0.10    |      |
| b      | 0.30        | -       | 0.40    |      |
| c      | 0.08        | -       | 0.16    |      |
| D      | 1.90        | 2.00    | 2.10    |      |
| E      | 1.95        | 2.10    | 2.25    |      |
| E1     | 1.20        | 1.30    | 1.40    |      |
| e      | 1.30BSC     |         |         |      |

※Recommend PCB solder land [Unit: mm]



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