

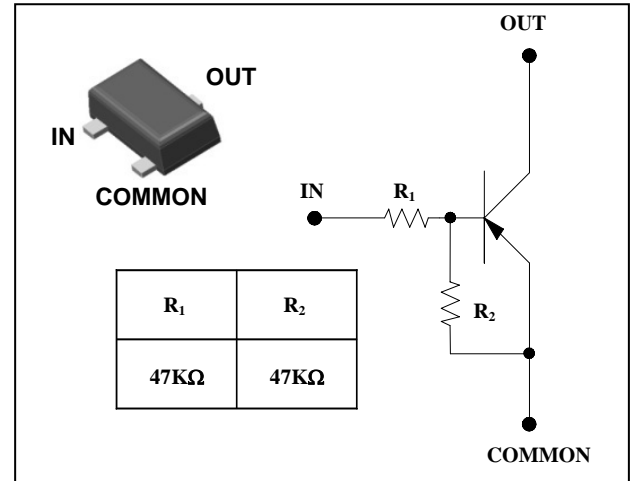
## Descriptions

- 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

## PIN Connection



## Ordering Information

| Type NO.  | Marking                     | Package Code |
|-----------|-----------------------------|--------------|
| SRA2204EF | $\frac{4R}{\square}$<br>① ② | SOT-523F     |

① Device Code ② Year&Week Code

## Absolute Maximum Ratings

(Ta=25°C)

| Characteristic            | Symbol           | Rating    | Unit |
|---------------------------|------------------|-----------|------|
| Output voltage            | V <sub>O</sub>   | -50       | V    |
| Input voltage             | V <sub>I</sub>   | -40, 10   | V    |
| Output current            | I <sub>O</sub>   | -100      | mA   |
| Power dissipation         | P <sub>D</sub>   | 150       | mW   |
| Junction temperature      | T <sub>J</sub>   | 150       | °C   |
| Storage temperature range | T <sub>stg</sub> | -55 ~ 150 | °C   |

## Electrical Characteristics

(Ta=25°C)

| Characteristic                  | Symbol              | Test Condition                                     | Min. | Typ. | Max.  | Unit |
|---------------------------------|---------------------|--|------|------|-------|------|
| Output cut-off current          | I <sub>O(OFF)</sub> | V <sub>O</sub> =-50V, V <sub>I</sub> =0            | -    | -    | -500  | nA   |
| DC current gain                 | G <sub>I</sub>      | V <sub>O</sub> =-5V, I <sub>O</sub> =-10mA         | 80   | 200  | -     | -    |
| Output voltage                  | V <sub>O(ON)</sub>  | I <sub>O</sub> =-10mA, I <sub>I</sub> =-0.5mA      | -    | -0.1 | -0.3  | V    |
| Input voltage (ON)              | V <sub>I(ON)</sub>  | V <sub>O</sub> =-0.2V, I <sub>O</sub> =-5mA        | -    | -2.8 | -5.0  | V    |
| Input voltage (OFF)             | V <sub>I(OFF)</sub> | V <sub>O</sub> =-5V, I <sub>O</sub> =-0.1mA        | -1.0 | -1.2 | -     | V    |
| Transition frequency            | f <sub>T</sub> *    | V <sub>O</sub> =-10V, I <sub>O</sub> =-5mA, f=1MHz | -    | 200  | -     | MHz  |
| Input current                   | I <sub>I</sub>      | V <sub>I</sub> =-5V, I <sub>O</sub> =0             | -    | -    | -0.18 | mA   |
| Input resistor (Input to base)  | R <sub>1</sub>      | -  | 33   | 47   | 61    | KΩ   |
| Input resistor (Base to common) | R <sub>2</sub>      | -  | 33   | 47   | 61    | KΩ   |

\* : Characteristic of transistor only

Electrical Characteristic Curves

Fig. 1  $P_D - T_a$

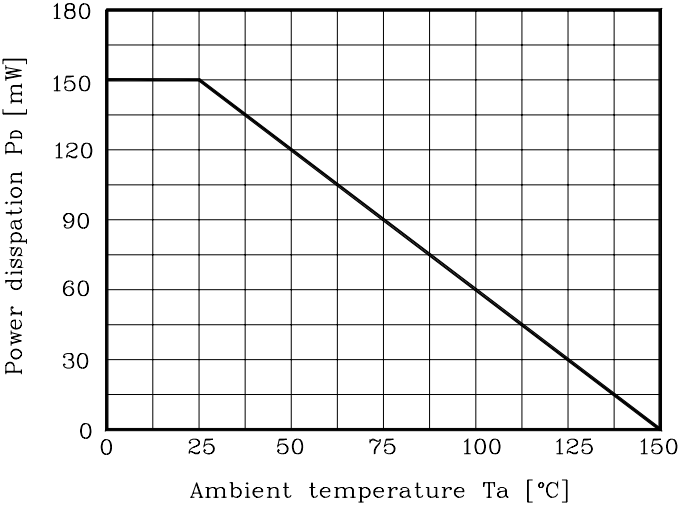


Fig. 2  $I_O - V_{I(ON)}$

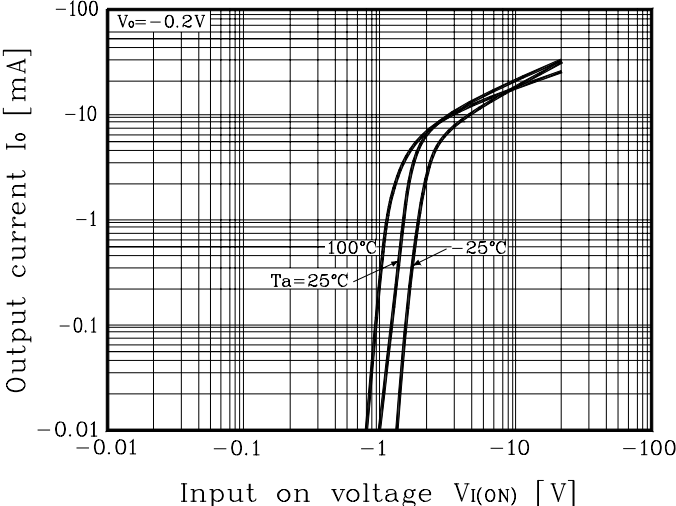


Fig. 3  $I_O - V_{I(OFF)}$

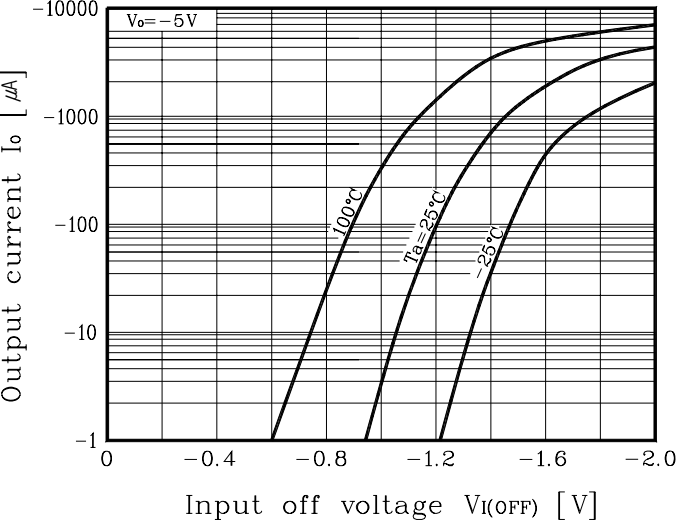
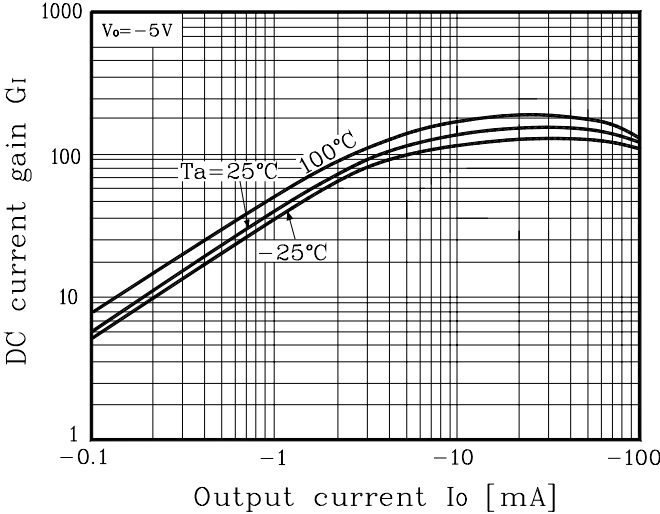
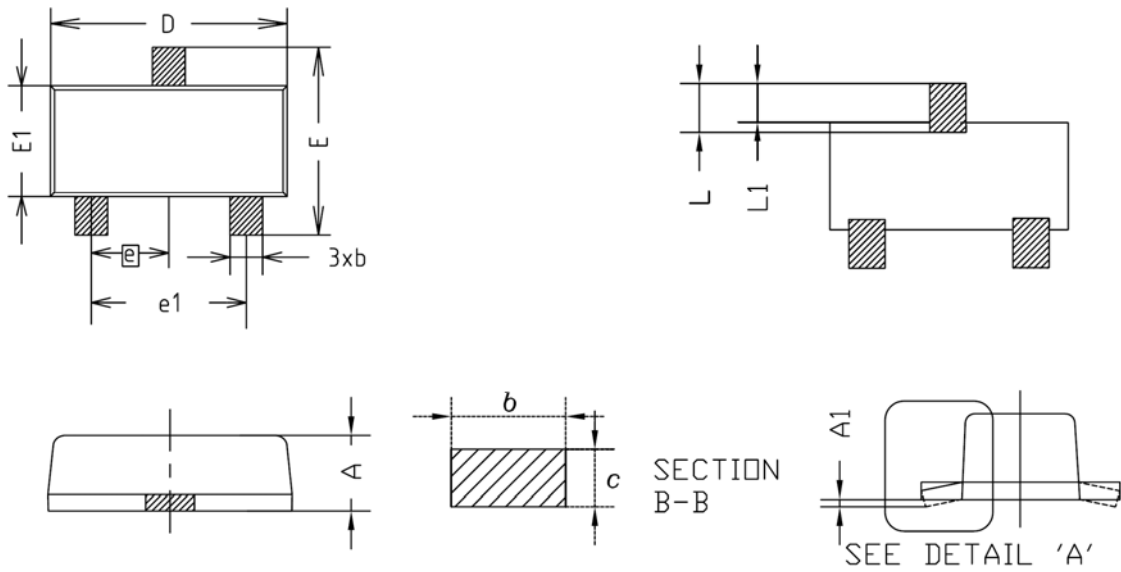


Fig. 4  $G_I - I_O$

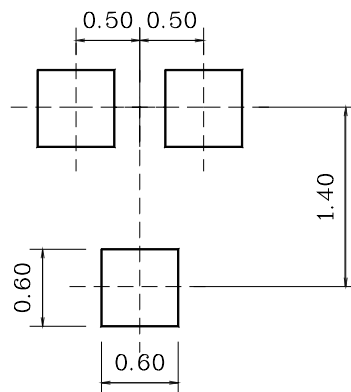


Outline Dimension



| SYMBOL | MILLIMETERS |         |         | NOTE |
|--------|-------------|---------|---------|------|
|        | MINIMUM     | NOMINAL | MAXIMUM |      |
| A      | 0.63        | 0.68    | 0.73    |      |
| A1     | 0.00        | -       | 0.10    |      |
| A2     | -           | -       | -       |      |
| b      | 0.25        | 0.30    | 0.35    |      |
| c      | 0.04        | 0.11    | 0.20    |      |
| D      | 1.50        | 1.60    | 1.70    |      |
| E      | 1.50        | 1.60    | 1.70    |      |
| E1     | 0.78        | 0.88    | 0.98    |      |
| e      | 0.50BSC     |         |         |      |
| e1     | 0.90        | -       | 1.10    |      |
| L      | 0.34        | 0.44    | 0.54    |      |
| L1     | 0.28        | 0.34    | 0.43    |      |

※Recommend PCB solder land [Unit: mm]



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