

## Descriptions

- Switching application
- Interface circuit and driver circuit application

## Features

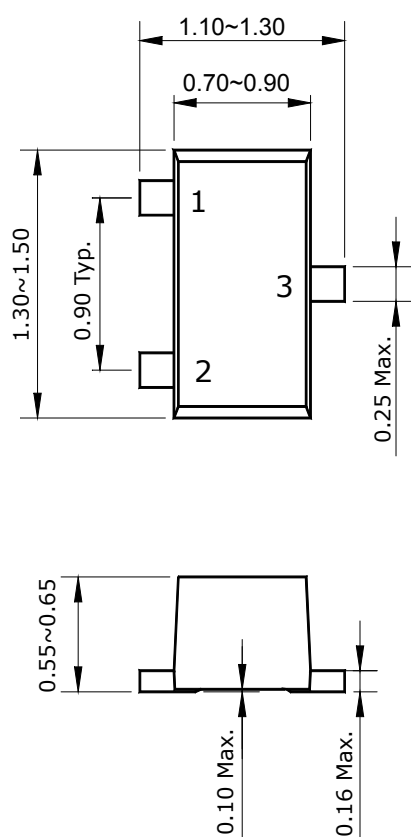
- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- High packing density

## Ordering Information

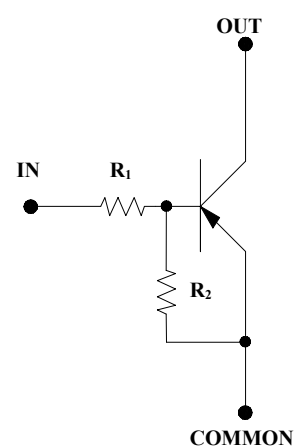
| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| SRA2219K | CR      | SOT-623F     |

## Outline Dimensions

unit : mm



### • Equivalent Circuit



| R <sub>1</sub> | R <sub>2</sub> |
|----------------|----------------|
| 4.7K $\Omega$  | 10K $\Omega$   |

### PIN Connections

1. IN
2. COMMON
3. OUT

**Absolute Maximum Ratings**

(Ta=25°C)

| Characteristic            | Symbol    | Rating    | Unit |
|---------------------------|-----------|-----------|------|
| Output voltage            | $V_O$     | -50       | V    |
| Input voltage             | $V_I$     | -20, 7    | V    |
| Output current            | $I_O$     | -100      | mA   |
| Power dissipation         | $P_D$     | 100       | 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                 | $G_I$        | $V_O = -5V, I_O = -10mA$           | 30   | -     | -    | -          |
| Output voltage                  | $V_{O(ON)}$  | $I_O = -10mA, I_I = -0.5mA$        | -    | -0.1  | -0.3 | V          |
| Input voltage (ON)              | $V_{I(ON)}$  | $V_O = -0.2V, I_O = -5mA$          | -    | -1.2  | -1.6 | V          |
| Input voltage (OFF)             | $V_{I(OFF)}$ | $V_O = -5V, I_O = -0.1mA$          | -0.5 | -0.82 | -    | V          |
| Transition frequency            | $f_T^*$      | $V_O = -10V, I_O = -5mA, f = 1MHz$ | -    | 200   | -    | MHz        |
| Input current                   | $I_I$        | $V_I = -5V, I_O = 0$               | -    | -     | -1.8 | mA         |
| Input resistor (Input to base)  | $R_1$        | -                                  | 3.3  | 4.7   | 6.1  | K $\Omega$ |
| Input resistor (Base to common) | $R_2$        | -                                  | 7    | 10    | 13   | K $\Omega$ |

\* : Characteristic of transistor only

## Electrical Characteristic Curves

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

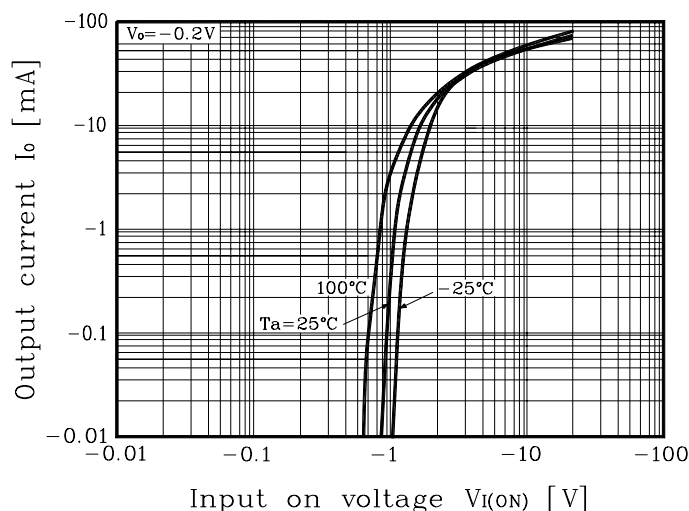


Fig. 2  $I_O - V_{I(OFF)}$

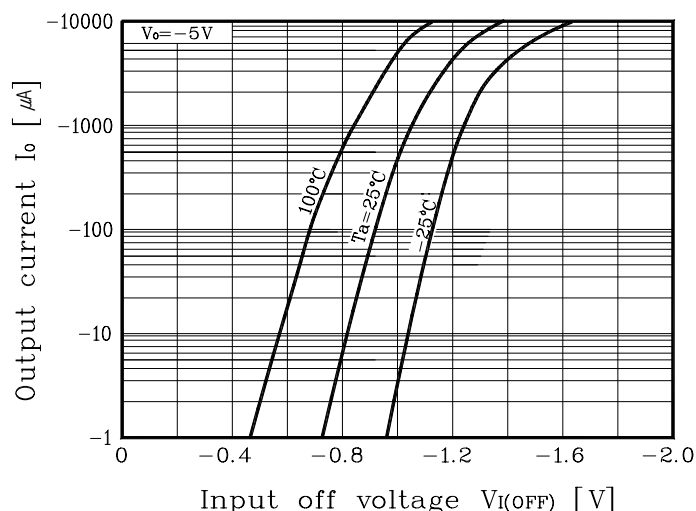
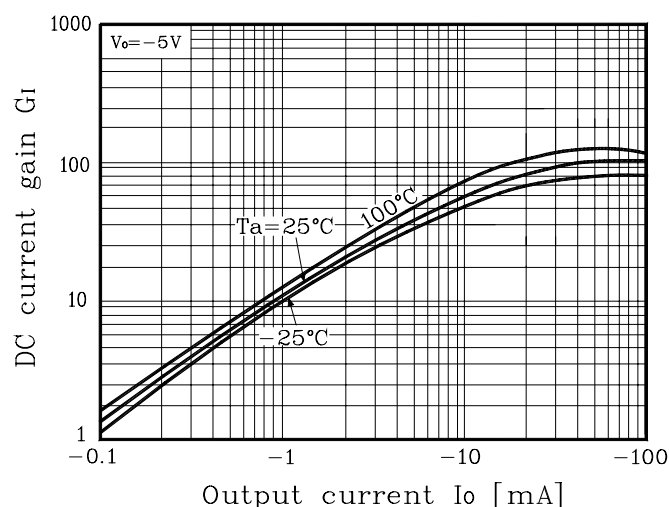


Fig. 3  $G_I - I_O$



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