

## Descriptions

- Switching application
- Interface circuit and driver circuit application

## Features

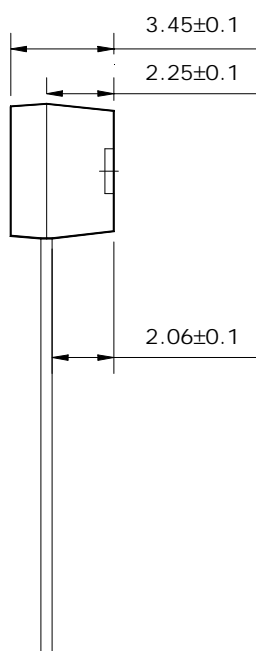
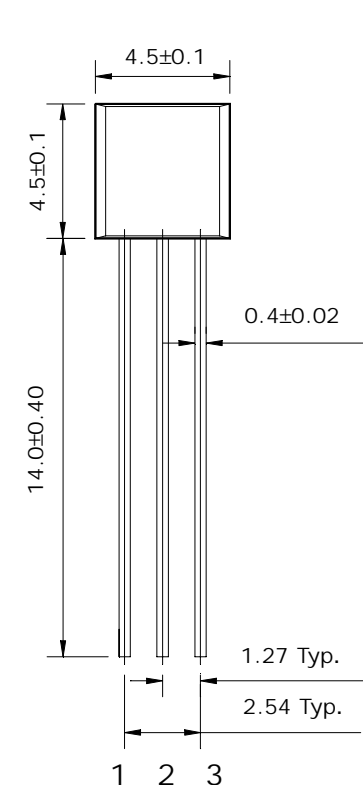
- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- High packing density

## Ordering Information

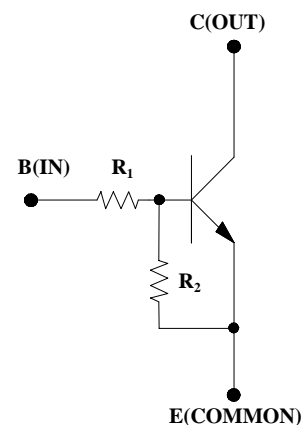
| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| SRC1204  | SRC1204 | TO-92        |

## Outline Dimensions

unit : mm



### • Equivalent Circuit



| R <sub>1</sub> | R <sub>2</sub> |
|----------------|----------------|
| 47KΩ           | 47KΩ           |

### PIN Connections

1. Emitter
2. Collector
3. Base

## Absolute maximum ratings

(Ta=25°C)

| Characteristic       | Symbol    | Ratings   | Unit |
|----------------------|-----------|-----------|------|
| Out Voltage          | $V_O$     | 50        | V    |
| Input Voltage        | $V_I$     | 40        | V    |
| Out Current          | $I_O$     | 100       | mA   |
| Power Dissipation    | $P_D$     | 200       | 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 |
|------------------------|--------------|-----------------------|------|------|------|------|
| Output Cut-off Current | $I_{O(OFF)}$ | $V_O=50V, V_I=0$      | -    | -    | 500  | nA   |
| DC Current Gain        | $G_I$        | $V_O=5V, I_O=10mA$    | 80   | 200  | -    | -    |
| Output Voltage         | $V_{O(ON)}$  | $I_O=10mA, I_I=0.5mA$ | -    | 0.1  | 0.3  | V    |
| Input Voltage (ON)     | $V_{I(ON)}$  | $V_O=0.2V, I_O=5mA$   | -    | 2.8  | 5.0  | V    |
| Input Voltage (OFF)    | $V_{I(OFF)}$ | $V_O=5V, I_O=0.1mA$   | 1.0  | 1.2  | -    | V    |
| Transition Frequency   | $f_T^*$      | $V_O=10V, I_O=5mA$    | -    | 200  | -    | MHz  |
| Input Current          | $I_I$        | $V_I=5V$              | -    | -    | 0.18 | mA   |

\* : Characteristic of Transistor Only

# Electrical Characteristic Curves

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

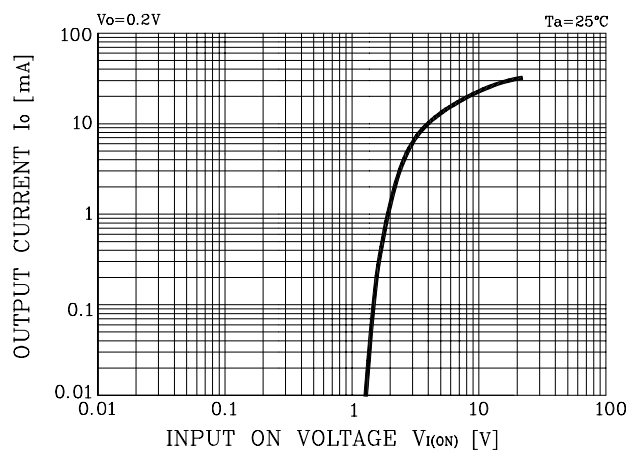


Fig. 2  $I_O - V_{I(OFF)}$

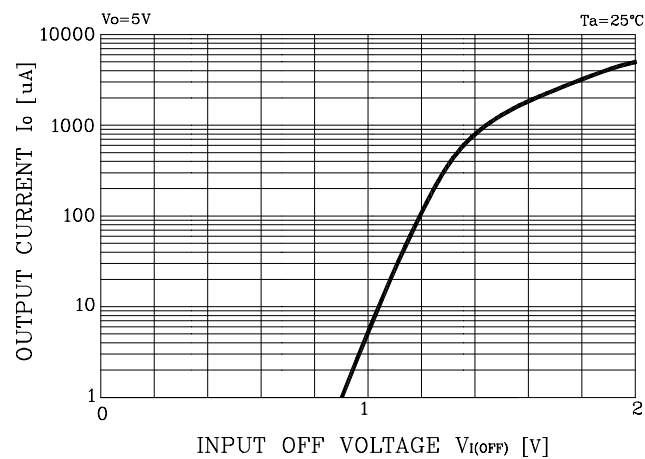


Fig. 3  $G_I - I_O$

