

## Description

- Digital transistor

## Features

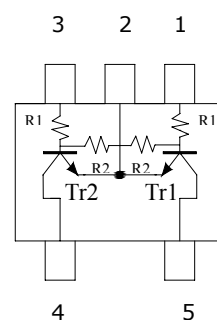
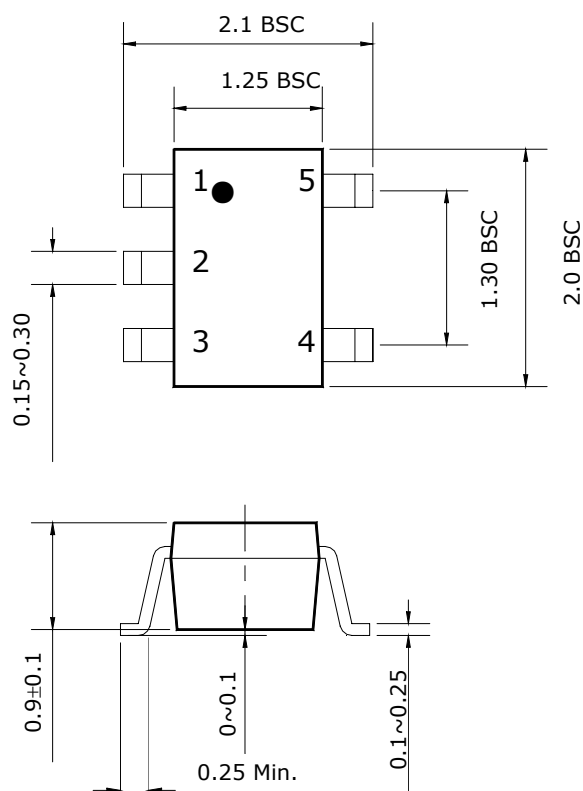
- Two SRC1207 chips in SOT-353 package
- With built-in bias resistors

## Ordering Information

| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| SUR521H  | 2X      | SOT-353      |

## Outline Dimensions

unit : mm



|     | R <sub>1</sub> | R <sub>2</sub> |
|-----|----------------|----------------|
| Tr1 | 10KΩ           | 47KΩ           |
| Tr2 | 10KΩ           | 47KΩ           |

### PIN Connections

1. Base 1
2. Emitter 1,2
3. Base 2
4. Collector 2
5. Collector 1

**Absolute maximum ratings (Tr1, Tr2 : NPN)****Ta=25°C**

| Characteristic       | Symbol    | Ratings   | Unit |
|----------------------|-----------|-----------|------|
| Out Voltage          | $V_O$     | 50        | V    |
| Input Voltage        | $V_I$     | 20        | V    |
| Out Current          | $I_O$     | 100       | mA   |
| Power Dissipation    | $P_D$     | 150       | mW   |
| Junction Temperature | $T_J$     | 150       | °C   |
| Storage Temperature  | $T_{STG}$ | -55 ~ 150 | °C   |

**Electrical Characteristics(Tr1, Tr2 : NPN)****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   | 150  | -    | -    |
| Output Voltage         | $V_{O(ON)}$  | $I_O=10mA, I_I=0.5mA$ | -    | 0.1  | 0.3  | V    |
| Input Voltage (ON)     | $V_{I(ON)}$  | $V_O=0.2V, I_O=5mA$   | -    | -    | 1.8  | V    |
| Input Voltage (OFF)    | $V_{I(OFF)}$ | $V_O=5V, I_O=0.1mA$   | 0.5  | -    | -    | V    |
| Transition Frequency   | $f_T^*$      | $V_O=10V, I_O=5mA$    | -    | 200  | -    | MHz  |
| Input Current          | $I_I$        | $V_I=5V$              | -    | -    | 0.88 | mA   |

\* : Characteristic of Transistor Only

## Electrical Characteristic Curves

Tr1, Tr2 : NPN

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

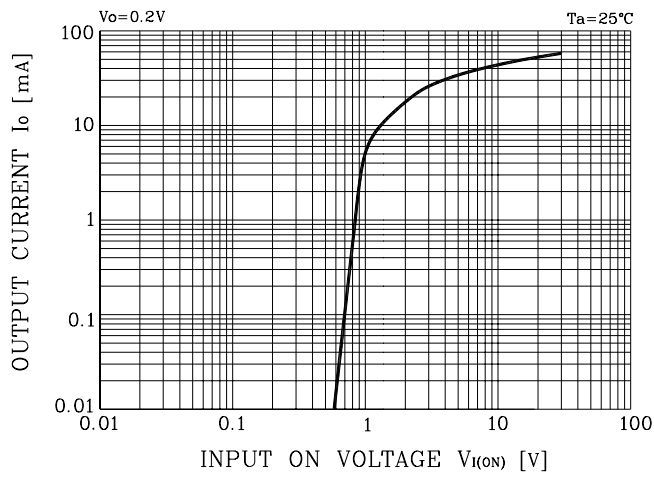


Fig. 2  $I_O - V_{I(OFF)}$

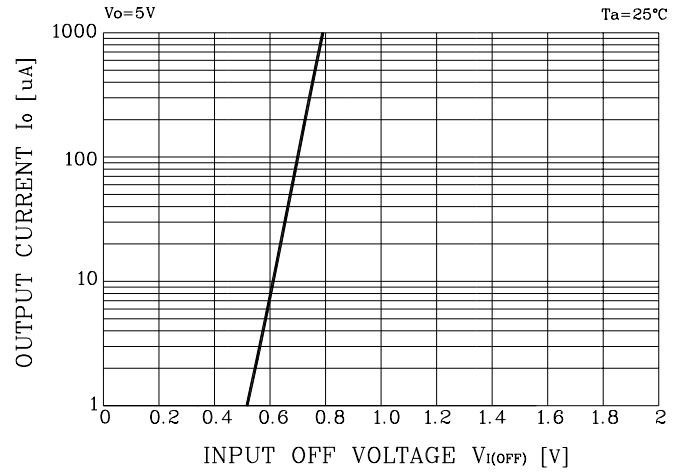


Fig. 3  $G_I - I_O$

