AUK Semiconductor

# SRA2205N

**PNP Silicon Transistor**

## Descriptions

- Switching application
- Interface circuit and driver circuit application

## Features

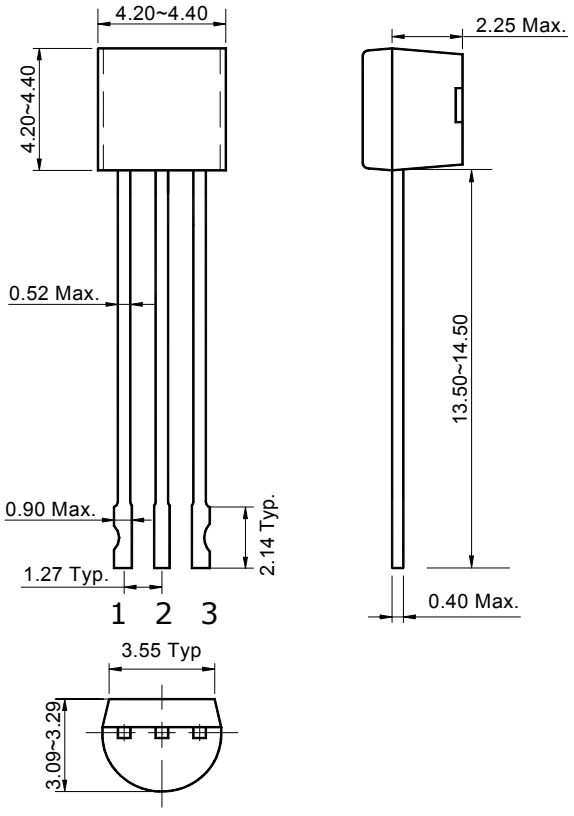
- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- Complementary pair with SRC1205N

## Ordering Information

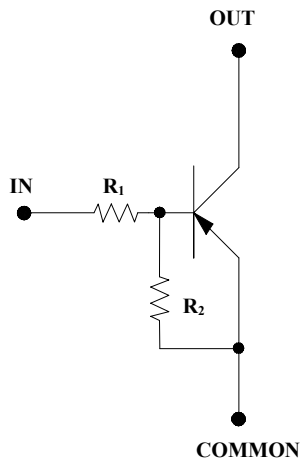
| Type NO. | Marking | Package Code |
|---|---|---|
| SRA2205N | SRA2205 | TO-92N |

## Outline Dimensions

**unit : mm**




**• Equivalent Circuit**




| $R_1$ | $R_2$ |
|---|---|
| 2.2KΩ | 47KΩ |

**PIN Connections**

1. COMMON
2. OUT
3. IN

## Absolute Maximum Ratings (Ta=25°C)

| Characteristic | Symbol | Rating | Unit |
|---|---|---|---|
| Output voltage | $V_O$ | -50 | V |
| Input voltage | $V_I$ | -15, 5 | V |
| Output current | $I_O$ | -100 | mA |
| Power dissipation | $P_D$ | 400 | 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 | 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 | - | - | -1.1 | 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, f=1MHz | - | 200 | - | MHz |
| Input current | $I_I$ | $V_I$=-5V, $I_O$=0 | - | - | -3.6 | mA |
| Input resistor (Input to base) | $R_1$ | - | 1.54 | 2.2 | 2.86 | KΩ |
| Input resistor (Base to common) | $R_2$ | - | 33 | 47 | 61 | KΩ |

* : Characteristic of transistor only

## Electrical Characteristic Curves

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

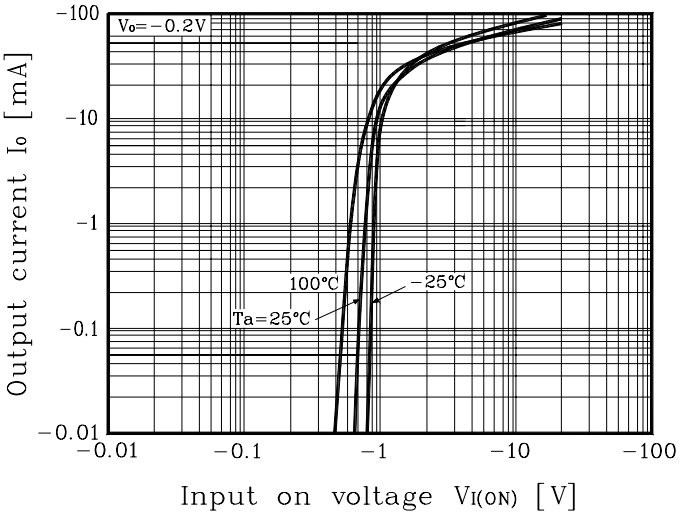



**Fig. 2 $I_O$ - $V_{I(OFF)}$**

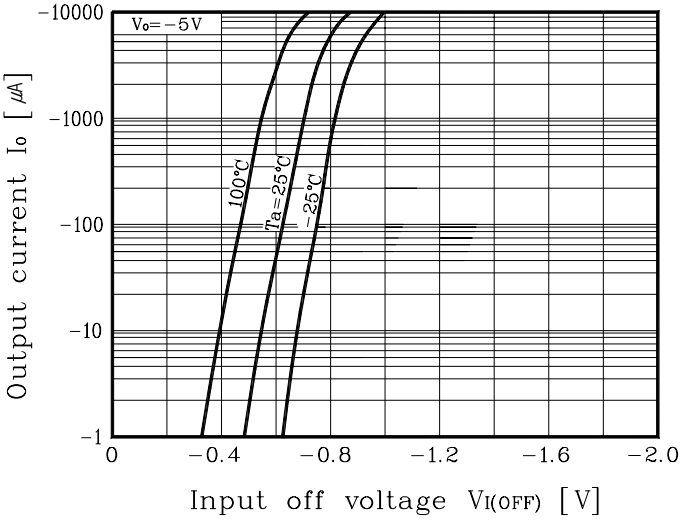
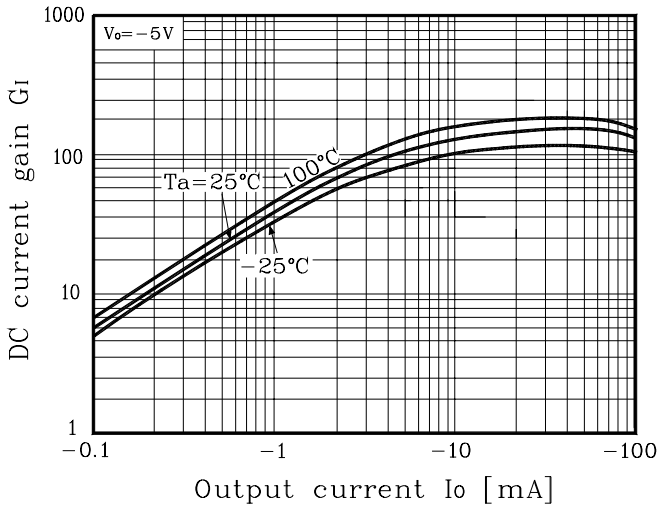



**Fig. 3 $G_I$ - $I_O$**

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