KODENSHI AUK

# SRA2203E

**PNP Silicon Transistor**

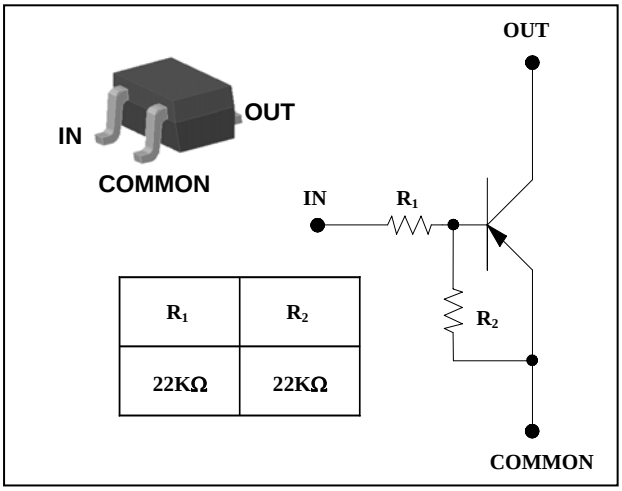
## Descriptions

- 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
- High packing density

## PIN Connection




| $R_1$ | $R_2$ |
|---|---|
| 22KΩ | 22KΩ |

## Ordering Information

| Type NO. | Marking | Package Code |
|---|---|---|
| SRA2203E | 3R □ (① ②) | SOT-523 |

①Device Code ② Year&Week Code

## Absolute Maximum Ratings (Ta=25°C)

| Characteristic | Symbol | Rating | Unit |
|---|---|---|---|
| Output voltage | $V_O$ | -50 | V |
| Input voltage | $V_I$ | -40, 10 | V |
| Output current | $I_O$ | -100 | mA |
| Power dissipation | $P_D$ | 150 | 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 | 70 | 120 | - | - |
| 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 | - | -2.1 | -3.0 | 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, f=1MHz | - | 200 | - | MHz |
| Input current | $I_I$ | $V_I$=-5V, $I_O$=0 | - | - | -0.36 | mA |
| Input resistor (Input to base) | $R_1$ | - | 15.4 | 22 | 28.6 | KΩ |
| Input resistor (Base to common) | $R_2$ | - | 15.4 | 22 | 28.6 | KΩ |

* : Characteristic of transistor only

## Electrical Characteristic Curves

**Fig. 1 $P_D$ - Ta**

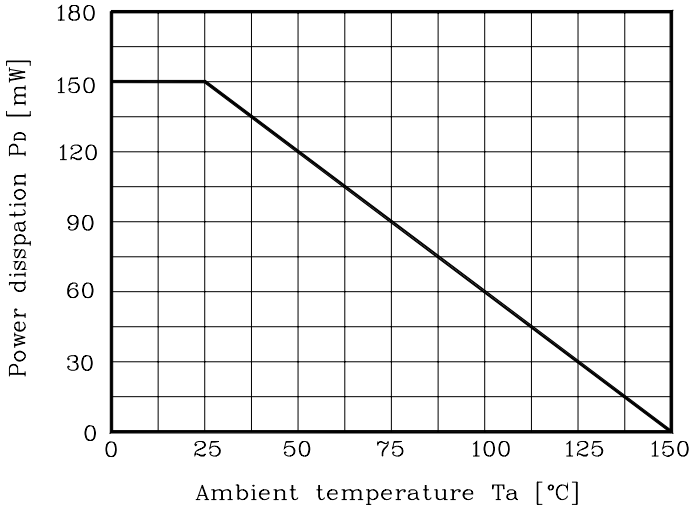



**Fig. 2 $I_O$ - $V_{I(ON)}$**

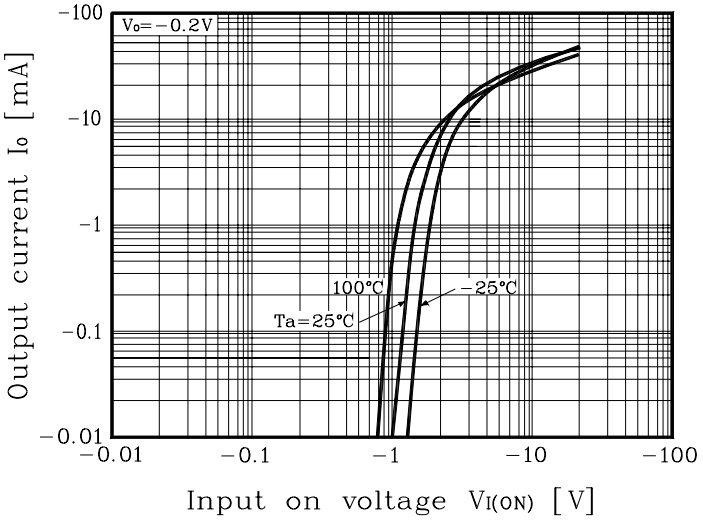



**Fig. 3 $I_O$ - $V_{I(OFF)}$**

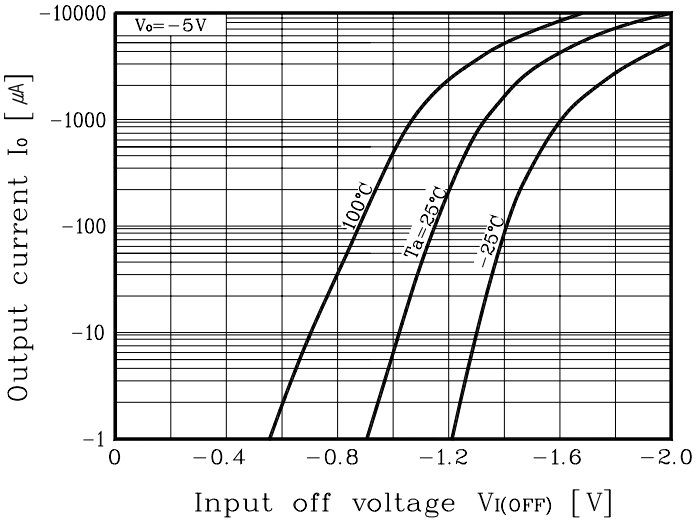
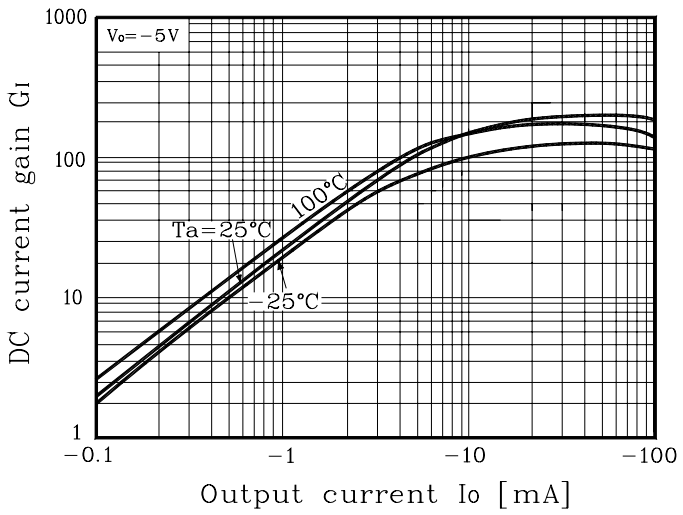
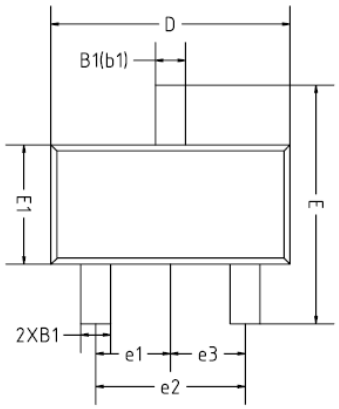
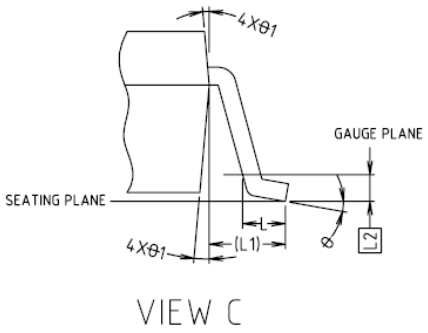


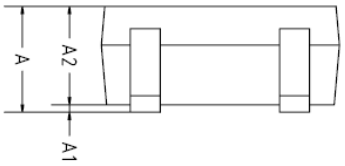

**Fig. 4 $G_I$ - $I_O$**

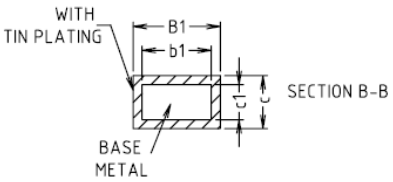


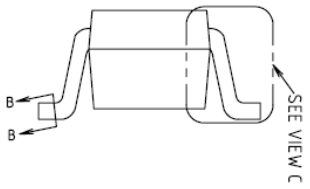
## Outline Dimension



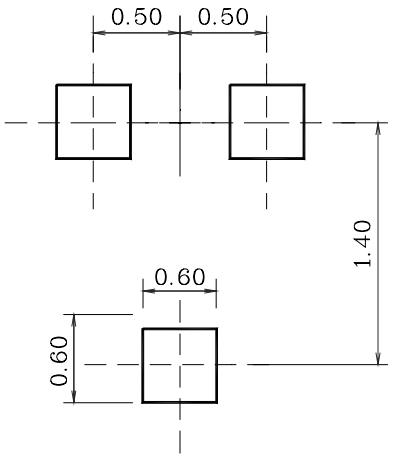




| SYMBOL | MILLIMETERS | | | NOTE |
|---|---|---|---|---|
| | MINIMUM | NOMINAL | MAXIMUM | |
| A | – | – | 0.80 | |
| A1 | 0.00 | – | 0.10 | |
| A2 | 0.65 | 0.70 | 0.75 | |
| B1 | 0.19 | – | 0.24 | |
| b1 | 0.17 | – | 0.21 | |
| c | 0.13 | – | 0.15 | |
| c1 | 0.10 | – | 0.12 | |
| D | 1.48 | 1.58 | 1.68 | |
| E | 1.50 | 1.60 | 1.70 | |
| E1 | 0.66 | 0.76 | 0.86 | |
| e1 | | 0.50 BSC | | |
| e2 | | 1.00 BSC | | |
| e3 | | 0.50 BSC | | |
| L | 0.15 | 0.205 | 0.30 | |
| L1 | | 0.40 REF | | |
| L2 | | 0.15 BSC | | |
| θ | 0° | – | 8° | |
| θ1 | 4° | – | 10° | |

**※Recommend PCB solder land [Unit: mm]**



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