

Descriptions

- Switching application
- Interface circuit and driver circuit application

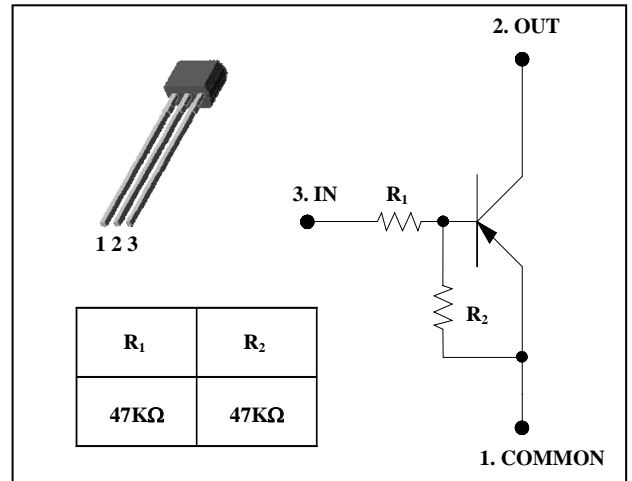
Features

- 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 |
|----------|---------|--------------|
| SRA2204M | 2204 | TO-92M |

PIN Connection



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 | 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) | $V_{I(ON)}$ | $V_O = -0.2V, I_O = -5mA$ | - | -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^* | $V_O = -10V, I_O = -5mA, f = 1MHz$ | - | 200 | - | MHz |
| Input current | I_I | $V_I = -5V, I_O = 0$ | - | - | -0.18 | mA |
| Input resistor (Input to base) | R_1 | - | 33 | 47 | 61 | K Ω |
| Input resistor (Base to common) | R_2 | - | 33 | 47 | 61 | K Ω |

* : Characteristic of transistor only

Electrical Characteristic Curves

Fig. 1 $P_c - T_a$

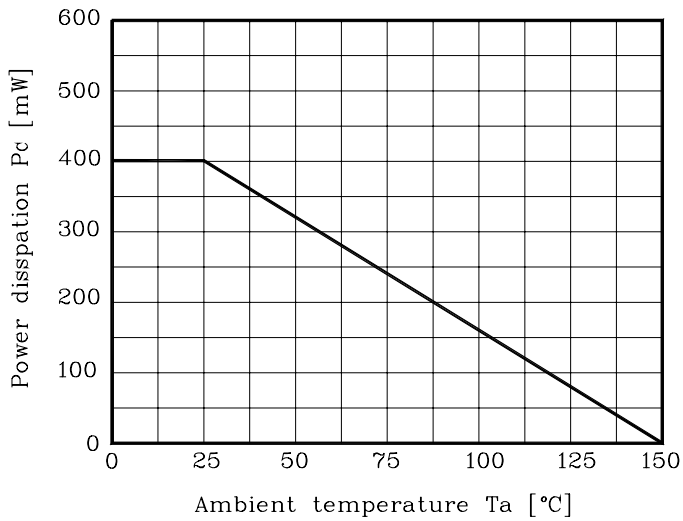


Fig. 2 $I_o - V_{I(ON)}$

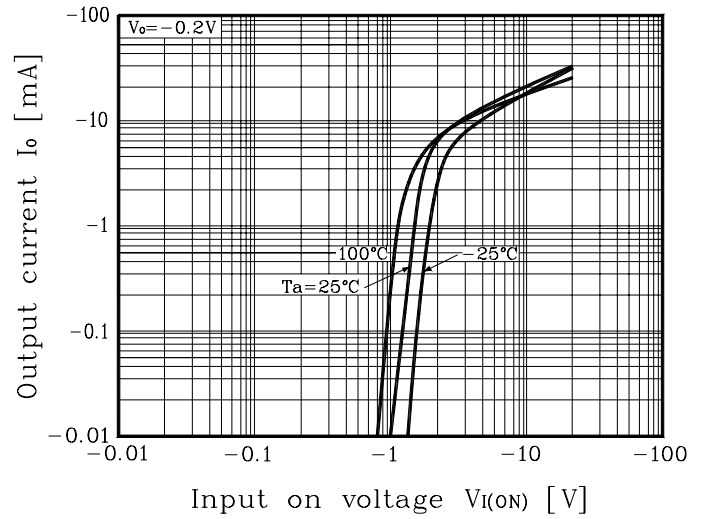


Fig. 3 $I_o - V_{I(OFF)}$

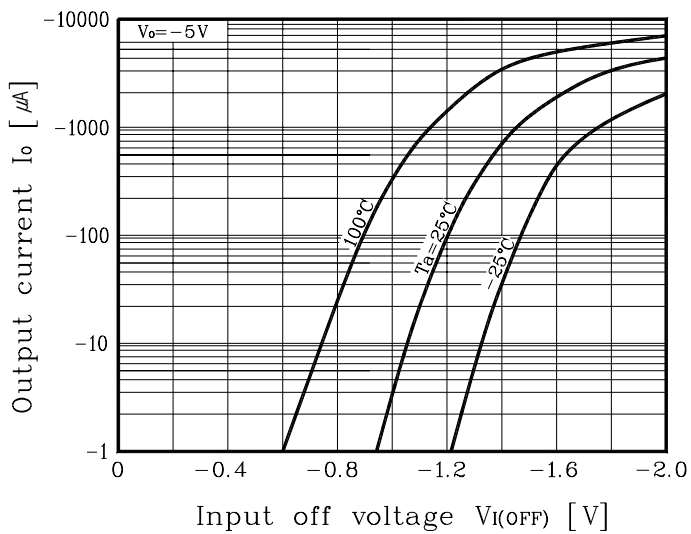
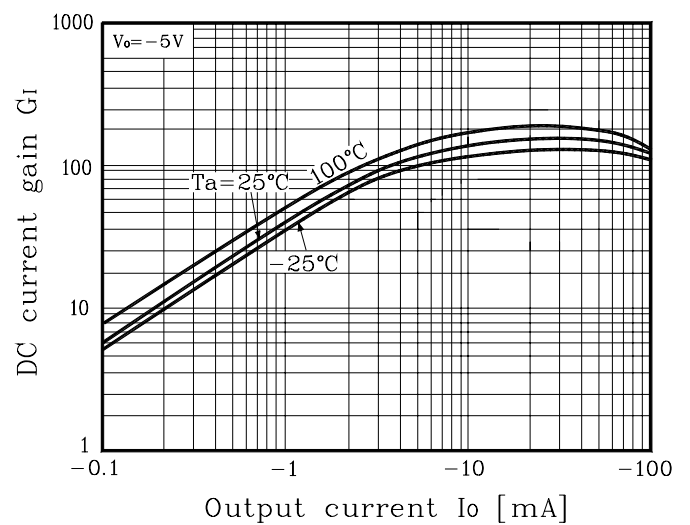
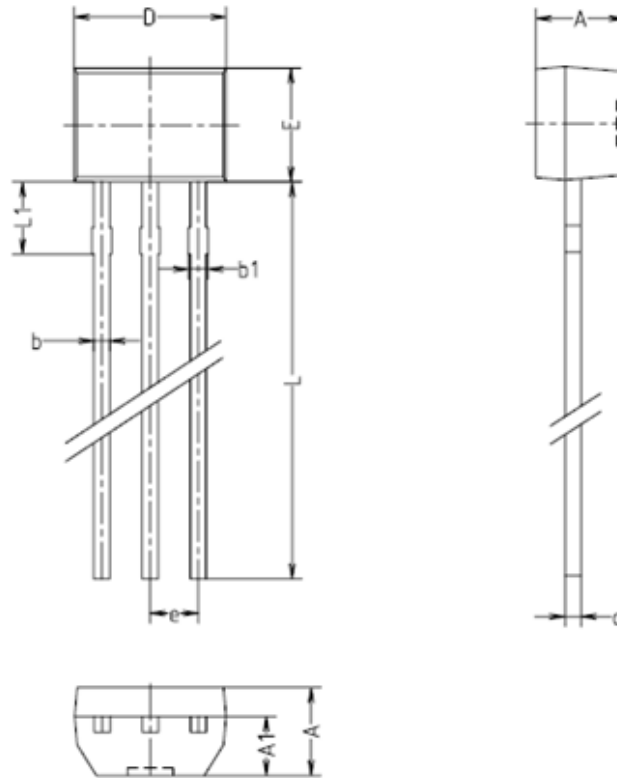


Fig. 4 $G_I - I_o$



Outline Dimension



| SYMBOL | TO-92M | | |
|--------|---------|---------|---------|
| | MINIMUM | NOMINAL | MAXIMUM |
| A | 2.25 | 2.30 | 2.35 |
| A1 | 1.50 | 1.55 | 1.60 |
| b | 0.40 | 0.42 | 0.44 |
| b1 | 0.40 | - | 0.50 |
| c | 0.40 | 0.42 | 0.44 |
| D | 3.93 | 4.00 | 4.07 |
| E | 2.93 | 3.00 | 3.07 |
| e | 1.17 | 1.27 | 1.37 |
| L | 14.30 | 14.50 | 14.70 |
| L1 | 2.05 | 2.15 | 2.25 |

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