

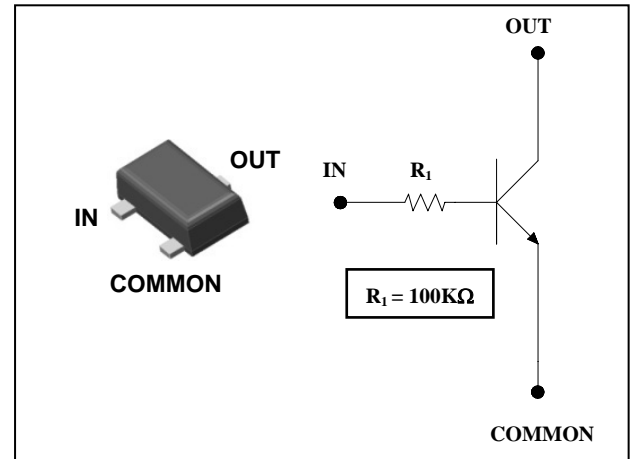
Descriptions

- Switching application
- Interface circuit and driver circuit application

Features

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

PIN Connection



Ordering Information

| Type NO. | Marking | Package Code |
|-----------|-------------|--------------|
| SRC1212UF | RB □ ① ② | SOT-323F |

① Device 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, -5 | V |
| Output current | I_O | 100 | mA |
| Power dissipation | P_D | 200 | 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 | $V_O=5V, I_O=10mA$ | 120 | - | - | - |
| Output voltage | $V_{O(ON)}$ | $I_O=10mA, I_I=0.5mA$ | - | 0.1 | 0.3 | V |
| Input voltage (ON) | $V_{I(ON)}$ | $V_O=0.2V, I_O=5mA$ | - | - | 4.4 | V |
| Input voltage (OFF) | $V_{I(OFF)}$ | $V_O=5V, I_O=0.1mA$ | 0.3 | - | - | V |
| Transition frequency | f_T^* | $V_O=10V, I_O=5mA, f=1MHz$ | - | 200 | - | MHz |
| Input current | I_I | $V_I=5V, I_O=0$ | - | - | 0.1 | mA |
| Input resistor (Input to base) | R_1 | - | 70 | 100 | 130 | KΩ |

* : Characteristic of transistor only

Electrical Characteristic Curves

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

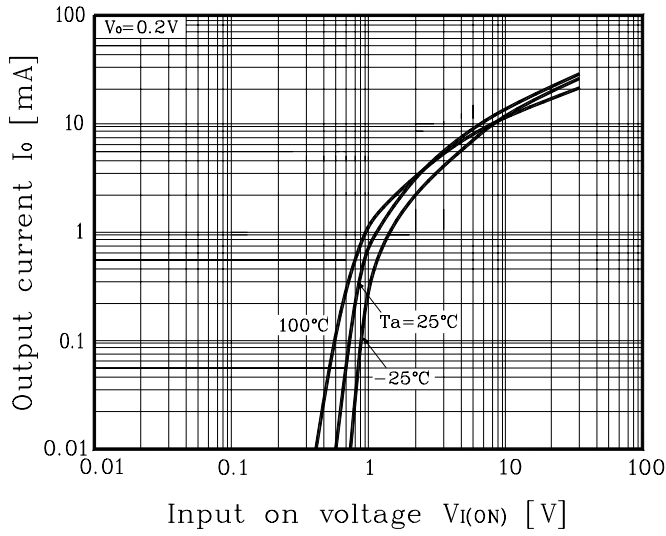


Fig. 2 $I_o - V_{I(OFF)}$

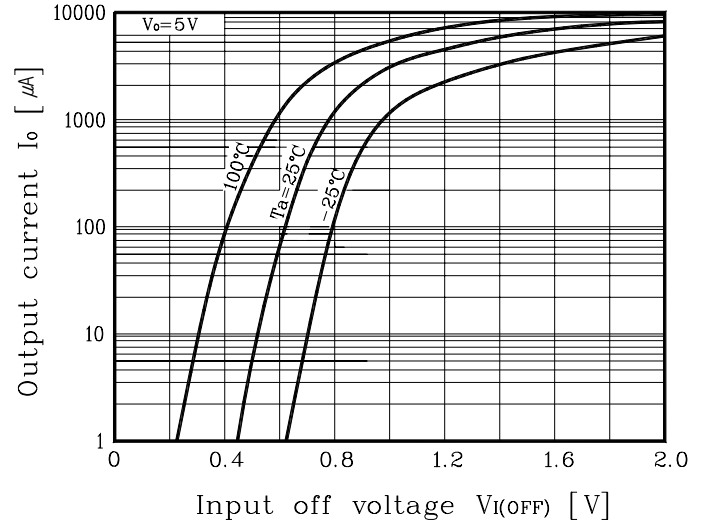
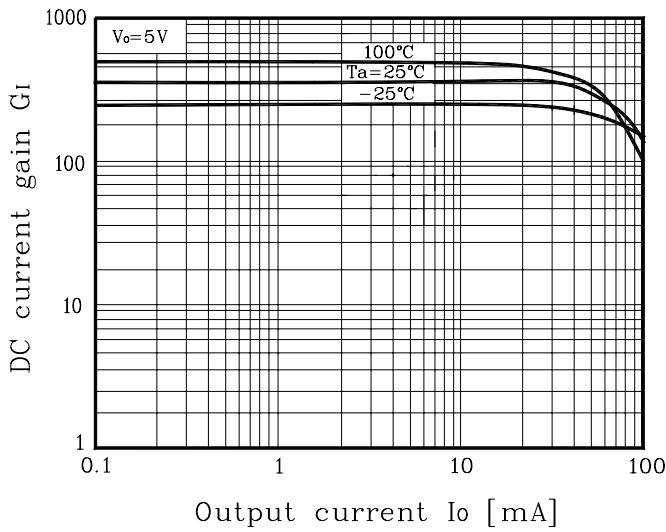
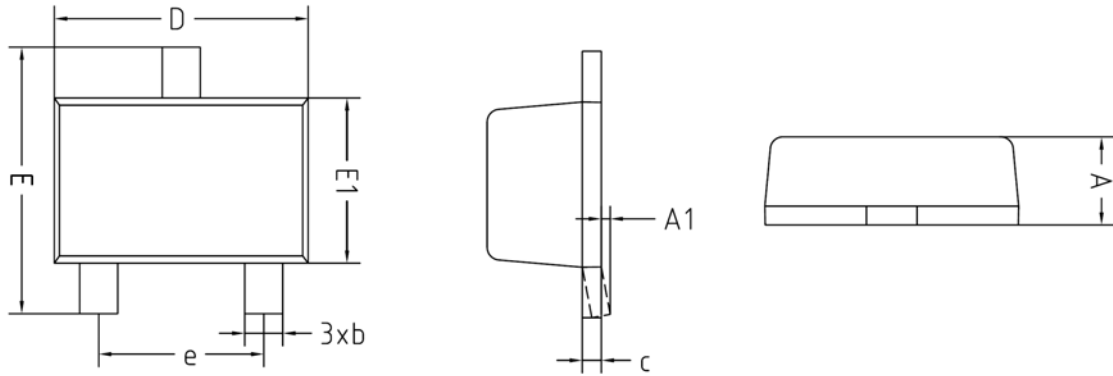


Fig. 3 $G_I - I_o$

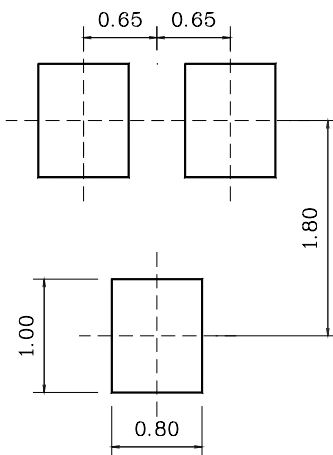


Outline Dimension



| SYMBOL | MILLIMETERS | | | NOTE |
|--------|-------------|---------|---------|------|
| | MINIMUM | NOMINAL | MAXIMUM | |
| A | 0.60 | - | 0.80 | |
| A1 | 0.00 | - | 0.10 | |
| b | 0.30 | - | 0.40 | |
| c | 0.08 | - | 0.16 | |
| D | 1.90 | 2.00 | 2.10 | |
| E | 1.95 | 2.10 | 2.25 | |
| E1 | 1.20 | 1.30 | 1.40 | |
| e | 1.30BSC | | | |

※Recommend PCB solder land [Unit: mm]



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