

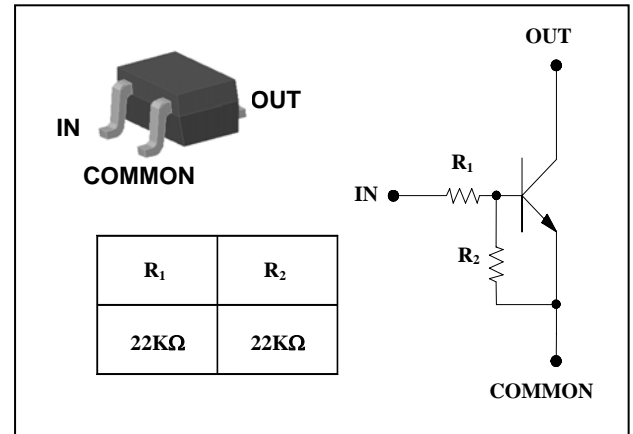
Descriptions

- 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



Ordering Information

| Type NO. | Marking | Package Code |
|----------|-------------|--------------|
| SRC1203U | R3 □ ① ② | SOT-323 |

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, -10 | 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 | 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 $P_D - T_a$

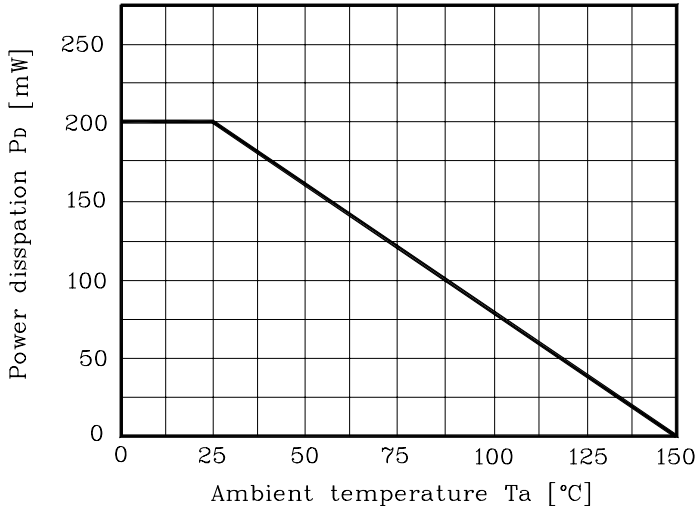


Fig. 2 $I_O - V_{I(ON)}$

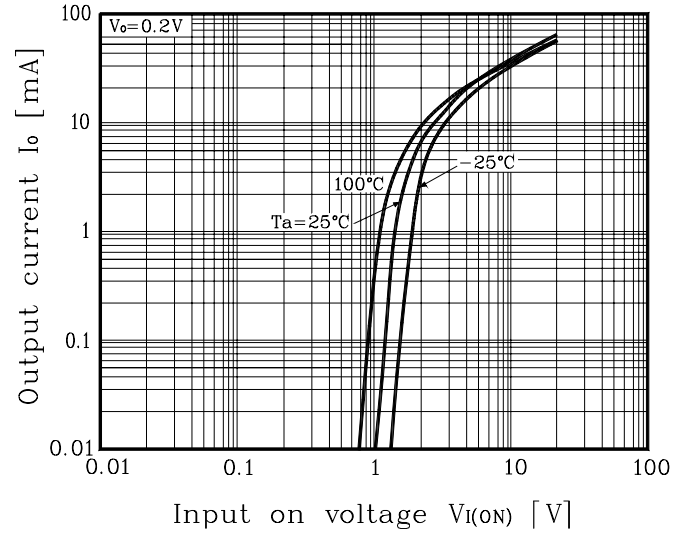


Fig. 3 $I_O - V_{I(OFF)}$

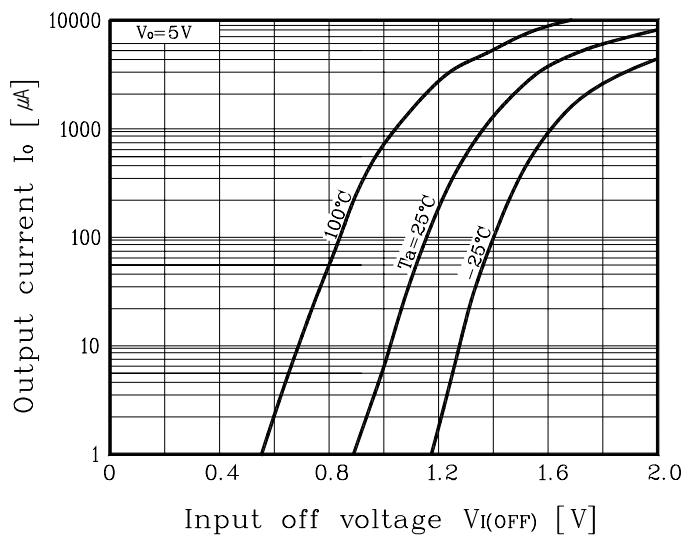
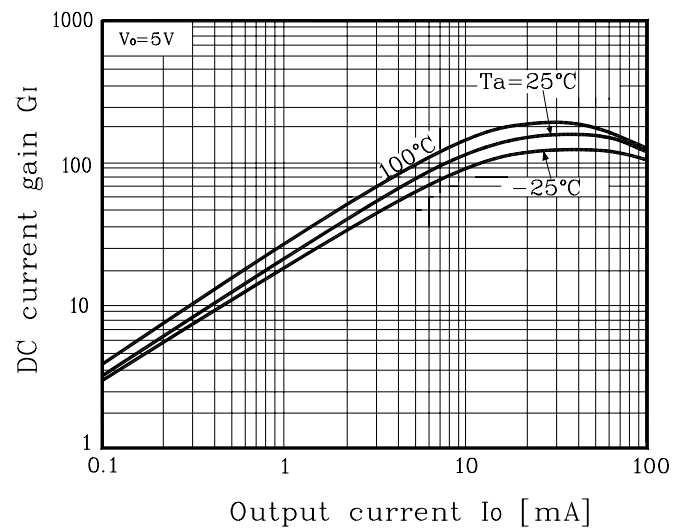
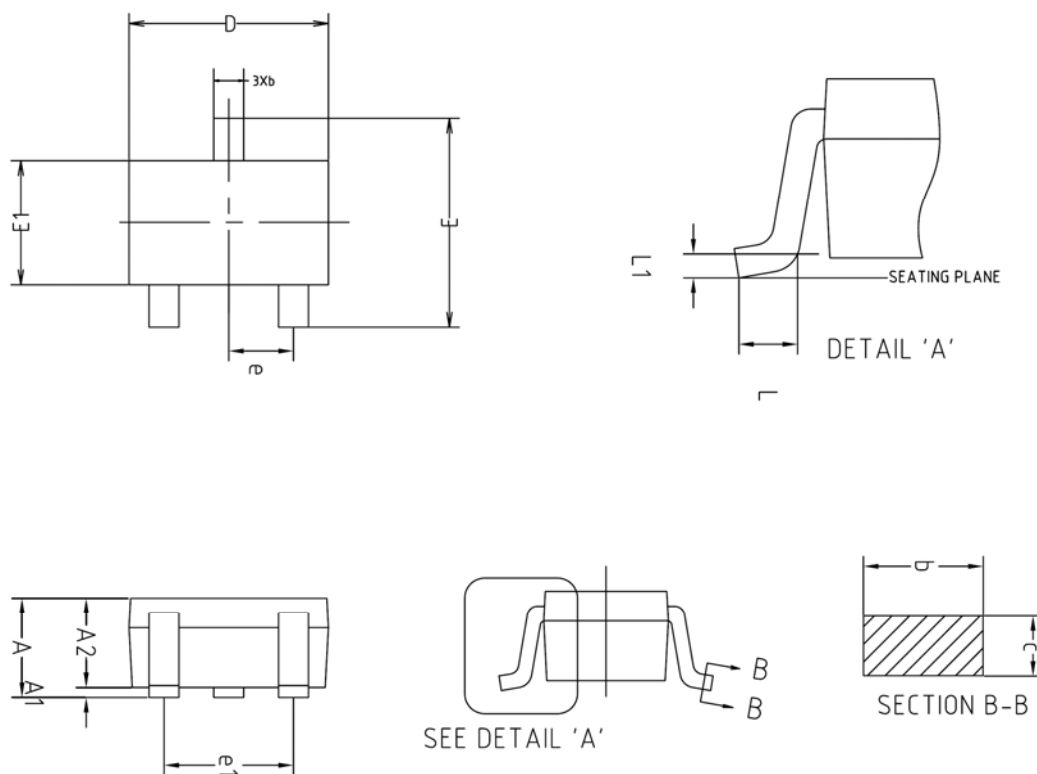


Fig. 4 $G_I - I_O$

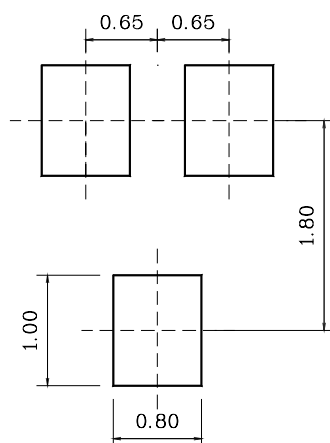


Outline Dimension



| SYMBOL | MILLIMETERS | | | NOTE |
|--------|-------------|---------|---------|------|
| | MINIMUM | NOMINAL | MAXIMUM | |
| A | 0.90 | - | 1.25 | |
| A1 | 0.00 | - | 0.10 | |
| A2 | 0.85 | 0.90 | 0.95 | |
| b | 0.30 | - | 0.40 | |
| c | 0.10 | - | 0.25 | |
| D | 1.90 | 2.00 | 2.10 | |
| E | 1.95 | 2.10 | 2.25 | |
| E1 | 1.15 | 1.25 | 1.35 | |
| e | 0.65BSC | | | |
| e1 | 1.20 | - | 1.40 | |
| L | 0.10 | - | - | |
| L1 | 0.12BSC | | | |

※Recommend PCB solder land [Unit: mm]



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