

Description

- Dual chip digital transistor

Features

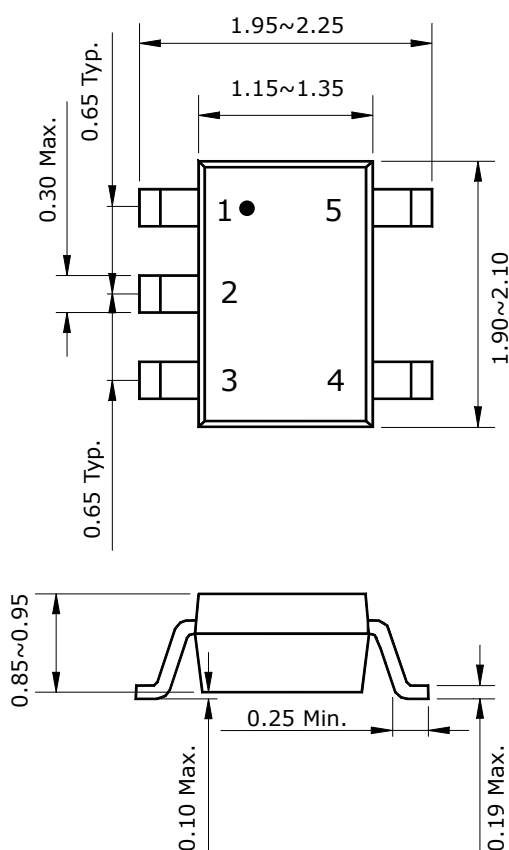
- Two SRA2219 chips in SOT-353 package
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process

Ordering Information

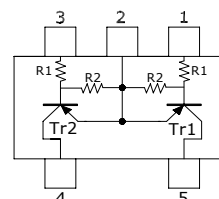
| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| SUR533H | 33H | SOT-353 |

Outline Dimensions

unit : mm



• Equivalent Circuit



| | R ₁ | R ₂ |
|-----|----------------|----------------|
| Tr1 | 4.7KΩ | 10KΩ |
| Tr2 | 4.7KΩ | 10KΩ |

PIN Connections

1. IN 1
2. COMMON 1,2
3. IN 2
4. OUT 2
5. OUT 1

Absolute maximum ratings [Tr1,Tr2]

(Ta=25°C)

| Characteristic | Symbol | Rating | Unit |
|---------------------------|-----------|-----------|------|
| Output voltage | V_O | -50 | V |
| Input voltage | V_I | -20, 7 | 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 |

※: Total rating

Electrical Characteristics [Tr1,Tr2]

(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 | $V_O = -5V, I_O = -10mA$ | 30 | - | - | - |
| Output voltage | $V_{O(ON)}$ | $I_O = -10mA, I_I = -0.5mA$ | - | -0.1 | -0.3 | V |
| Input voltage (ON) | $V_{I(ON)}$ | $V_O = -0.2V, I_O = -5mA$ | - | -1.2 | -1.6 | V |
| Input voltage (OFF) | $V_{I(OFF)}$ | $V_O = -5V, I_O = -0.1mA$ | -0.5 | -0.82 | - | V |
| Transition frequency | f_T^* | $V_O = -10V, I_O = -5mA, f = 1MHz$ | - | 200 | - | MHz |
| Input current | I_I | $V_I = -5V, I_O = 0$ | - | - | -1.8 | mA |
| Input resistor (Input to base) | R_1 | - | 3.3 | 4.7 | 6.1 | KΩ |
| Input resistor (Base to common) | R_2 | - | 7 | 10 | 13 | KΩ |

*: Characteristic of transistor only

Electrical Characteristic Curves

[Tr1,Tr2]

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

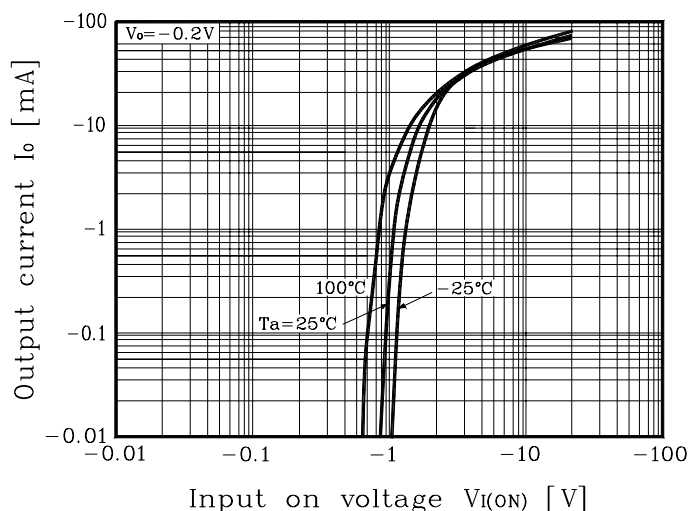


Fig. 2 $I_O - V_{I(OFF)}$

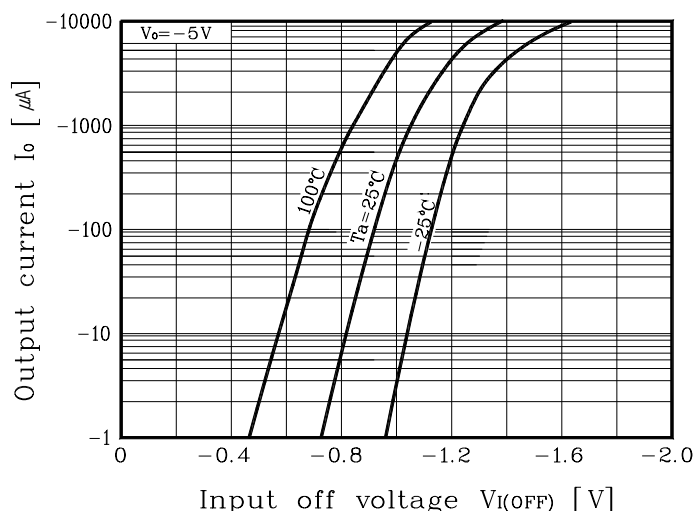
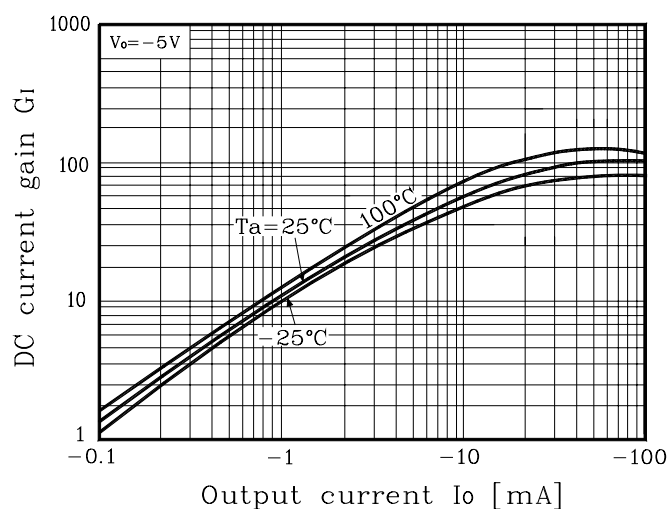


Fig. 3 $G_I - I_O$



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