

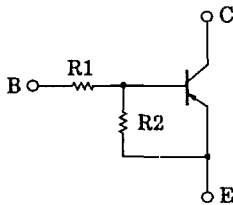
RN2701, 2702, 2703 RN2704, 2705, 2706

(RN2701)

SWITCHING, INVERTER CIRCUIT, INTERFACE CIRCUIT
AND DRIVER CIRCUIT APPLICATIONS.

- Including Two Devices in USV (Ultra Super Mini Type with 5 leads)
- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process
- Complementary to RN1701~RN1706

EQUIVALENT CIRCUIT AND BIAS RESISTOR VALUES



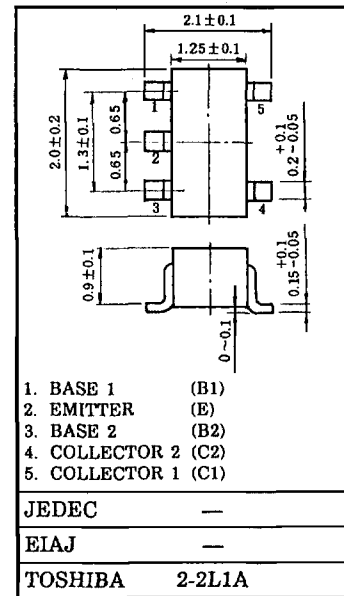
| TYPE No. | R1 (kΩ) | R2 (kΩ) |
|----------|---------|---------|
| RN2701 | 4.7 | 4.7 |
| RN2702 | 10 | 10 |
| RN2703 | 22 | 22 |
| RN2704 | 47 | 47 |
| RN2705 | 2.2 | 47 |
| RN2706 | 4.7 | 47 |

MAXIMUM RATINGS (Ta = 25°C) (Q1, Q2 COMMON)

| CHARACTERISTIC | | SYMBOL | RATING | UNIT |
|-----------------------------|--------------|--------|---------|------|
| Collector-Base Voltage | RN2701~2706 | VCBO | -50 | V |
| Collector-Emitter Voltage | | VCEO | -50 | V |
| Emitter-Base Voltage | RN2701~2704 | VEBO | -10 | V |
| | RN2705, 2706 | | -5 | |
| Collector Current | RN2701~2706 | IC | -100 | mA |
| Collector Power Dissipation | | PC* | 200 | mW |
| Junction Temperature | | Tj | 150 | °C |
| Storage Temperature Range | | Tstg | -55~150 | °C |

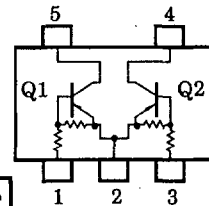
* : Total Rating

Unit in mm



Weight : 6.2mg

EQUIVALENT CIRCUIT (TOP VIEW)



RN2701, 2702, 2703
RN2704, 2705, 2706

(RN2701)

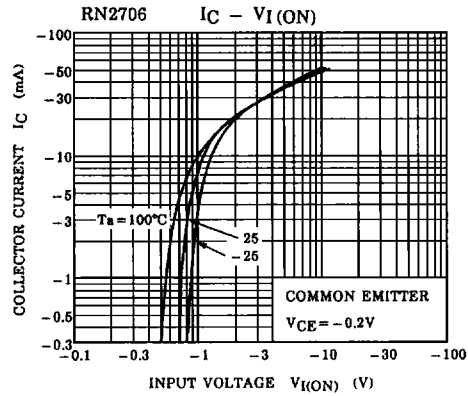
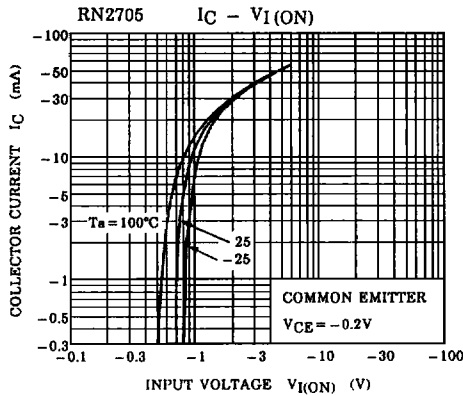
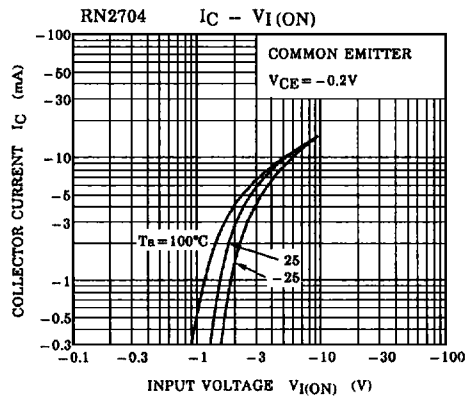
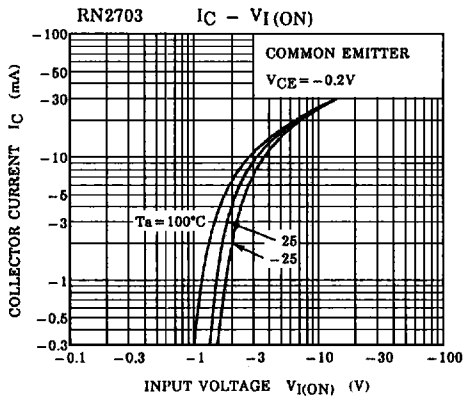
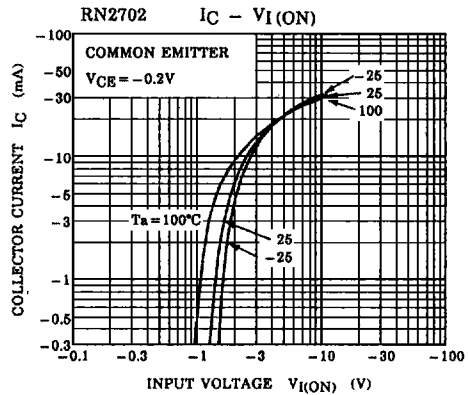
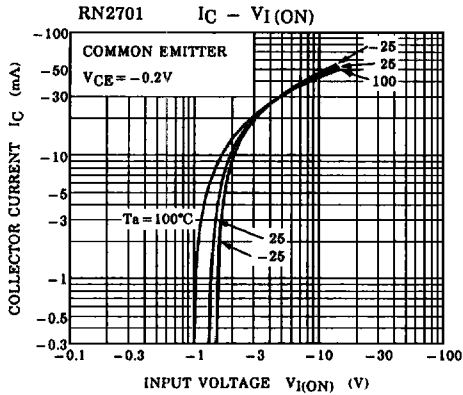
ELECTRICAL CHARACTERISTICS (Ta = 25°C) (Q1, Q2 COMMON)

| CHARACTERISTIC | | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|-----------------------------|---------------------------------|---|--------------|--------|--------------|------|
| Collector Cut-off Current | RN2701~2706 | ICBO | V _{CB} = -50V, I _E = 0 | — | — | -100 | nA |
| | | ICEO | V _{CE} = -50V, I _B = 0 | — | — | -500 | |
| Emitter Cut-off Current | RN2701 | IEBO | V _{EB} = -10V, I _C = 0 | -0.82 | — | -1.52 | mA |
| | RN2702 | | | -0.38 | — | -0.71 | |
| | RN2703 | | | -0.17 | — | -0.33 | |
| | RN2704 | | -0.082 | — | -0.15 | | |
| | RN2705 | | V _{EB} = -5V, I _C = 0 | -0.078 | — | -0.145 | |
| | RN2706 | | | -0.074 | — | -0.138 | |
| DC Current Gain | RN2701 | h _{FE} | V _{CE} = -5V, I _C = -10mA | 30 | — | — | |
| | RN2702 | | | 50 | — | — | |
| | RN2703 | | | 70 | — | — | |
| | RN2704 | | | 80 | — | — | |
| | RN2705 | | | 80 | — | — | |
| | RN2706 | | | 80 | — | — | |
| Collector-Emitter Saturation Voltage | RN2701~2706 | V _{CE(sat)} | I _C = -5mA, I _B = -0.25mA | — | -0.1 | -0.3 | V |
| Input Voltage (ON) | RN2701 | V _{I(ON)} | V _{CE} = -0.2V, I _C = -5mA | -1.1 | — | -2.0 | V |
| | RN2702 | | | -1.2 | — | -2.4 | |
| | RN2703 | | | -1.3 | — | -3.0 | |
| | RN2704 | | | -1.5 | — | -5.0 | |
| | RN2705 | | | -0.6 | — | -1.1 | |
| | RN2706 | | | -0.7 | — | -1.3 | |
| Input Voltage (OFF) | RN2701~2704 RN2705, 2706 | V _{I(OFF)} | V _{CE} = -5V, I _C = -0.1mA | -1.0 -0.5 | — | -1.5 -0.8 | V |
| Transition Frequency | RN2701~2706 | f _T | V _{CE} = -10V, I _C = -5mA | — | 200 | — | MHz |
| Collector Output Capacitance | RN2701~2706 | C _{ob} | V _{CB} = -10V, I _E = 0, f = 1MHz | — | 3 | 6 | pF |
| Input Resistor | RN2701 | R ₁ | | 3.29 | 4.7 | 6.11 | kΩ |
| | RN2702 | | | 7 | 10 | 13 | |
| | RN2703 | | | 15.4 | 22 | 28.6 | |
| | RN2704 | | | 32.9 | 47 | 61.1 | |
| | RN2705 | | | 1.54 | 2.2 | 2.86 | |
| | RN2706 | | | 3.29 | 4.7 | 6.11 | |
| Resistor Ratio | RN2701~2704 | R ₁ / R ₂ | | 0.9 | 1.0 | 1.1 | |
| | RN2705 | | | 0.0421 | 0.0468 | 0.0515 | |
| | RN2706 | | | 0.09 | 0.1 | 0.11 | |

RN2701, 2702, 2703 RN2704, 2705, 2706

(RN2701)

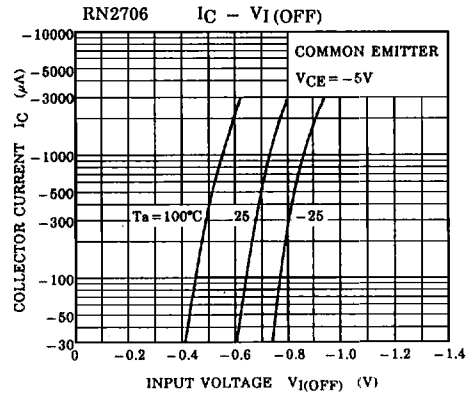
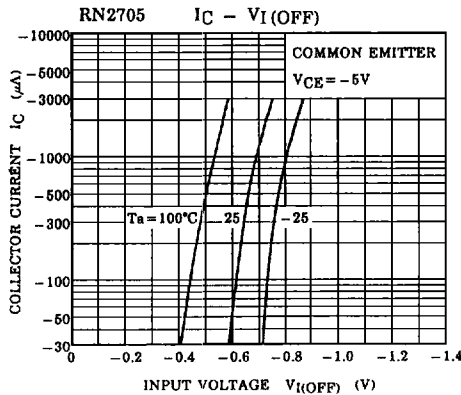
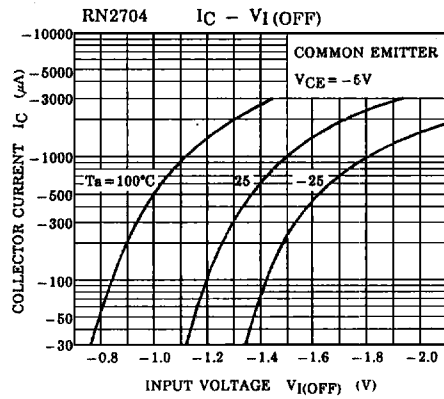
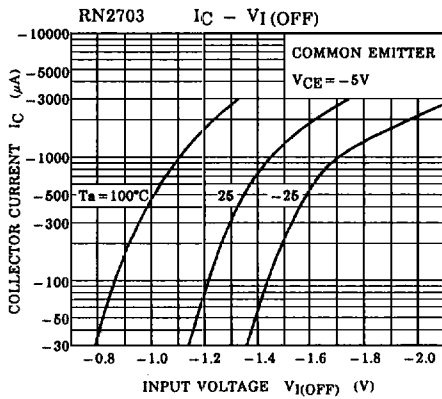
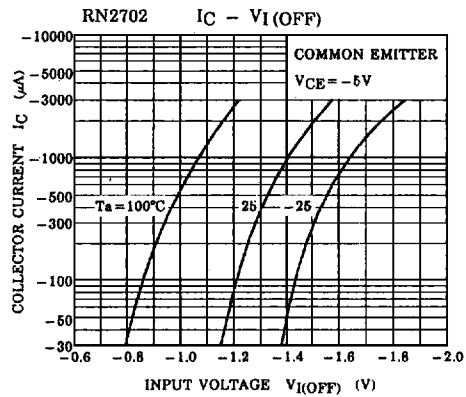
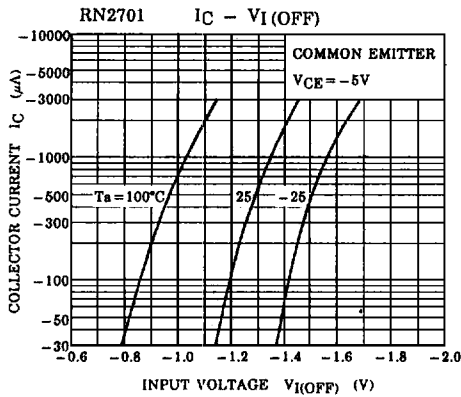
(Q1, Q2 COMMON)



RN2701, 2702, 2703 RN2704, 2705, 2706

(RN2701)

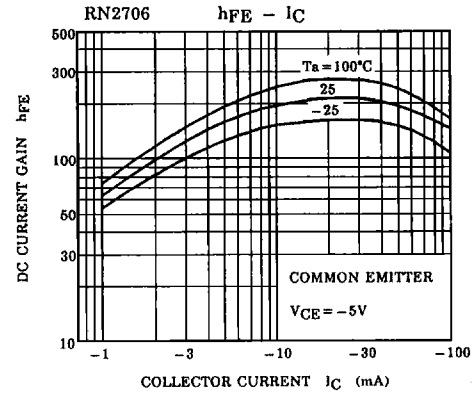
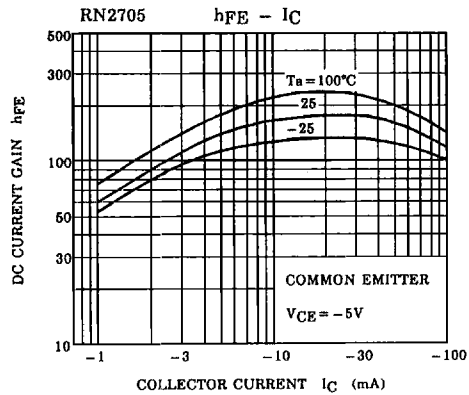
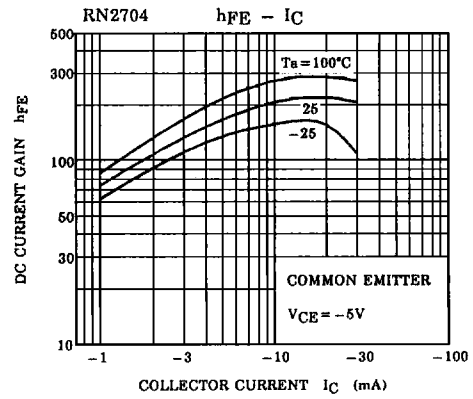
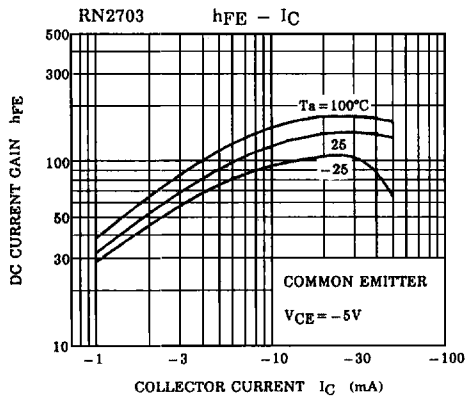
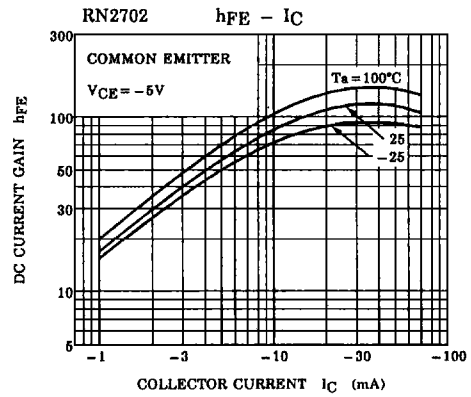
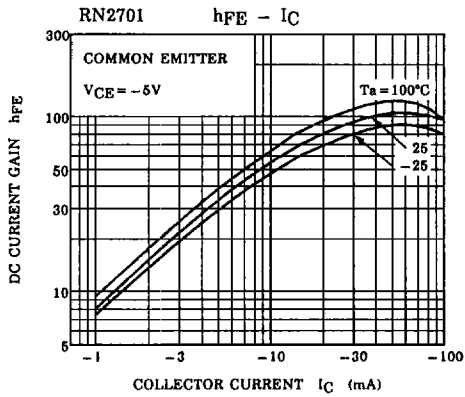
(Q1, Q2 COMMON)



RN2701, 2702, 2703 RN2704, 2705, 2706

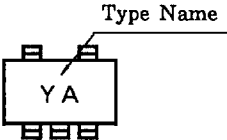
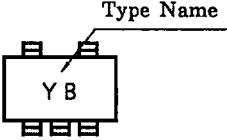
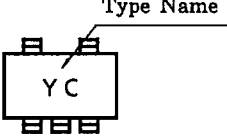
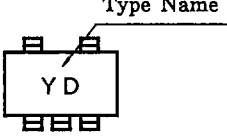
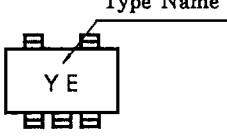
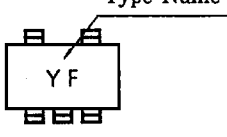
(RN2701)

(Q1, Q2 COMMON)



**RN2701, 2702, 2703
RN2704, 2705, 2706**

(RN2701)

| TYPE NAME | MARKING |
|-----------|---|
| RN2701 |  |
| RN2702 |  |
| RN2703 |  |
| RN2704 |  |
| RN2705 |  |
| RN2706 |  |