

RT1P440X SERIES

〈Transistor〉

Transistor With Resistor

For Switching Application

Silicon PNP Epitaxial Type

DESCRIPTION

RT1P440X is a one chip transistor with built-in bias resistor, NPN type is RT1N440X.

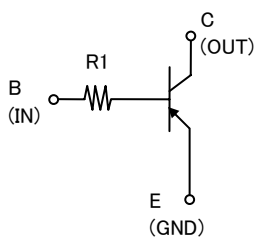
FEATURE

- Built-in bias resistor ($R1=47k\Omega$).

APPLICATION

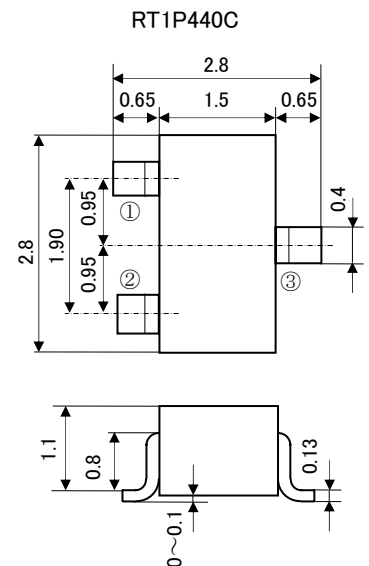
. Inverted circuit, switching circuit, interface circuit, driver circuit.

Equivalent circuit



OUTLINE DRAWING

UNIT : mm



JEITA : SC-59

JEDEC : Similar to TO-236

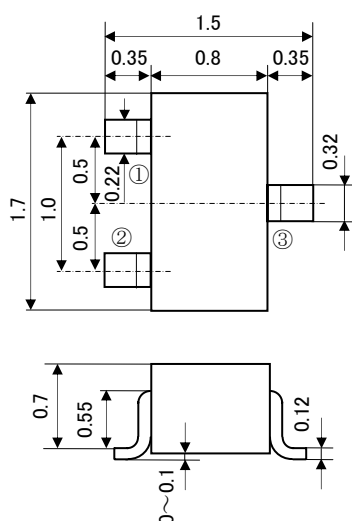
Terminal Connector

① : Base

② : Emitter

③ : Collector

RT1P440U



JEITA : SC-75A

JEDEC : —

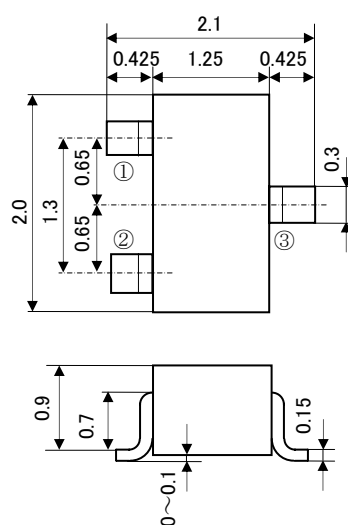
Terminal Connector

① : Base

② : Emitter

③ : Collector

RT1P440M



JEITA : SC-70

JEDEC : —

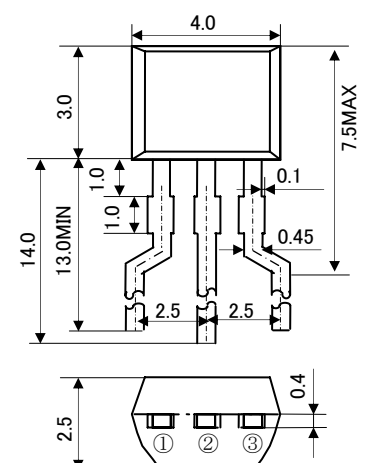
Terminal Connector

① : Base

② : Emitter

③ : Collector

RT1P440S



JEITA : —

JEDEC : —

Terminal Connector

① : Emitter

② : Collector

③ : Base

RT1P440X SERIES

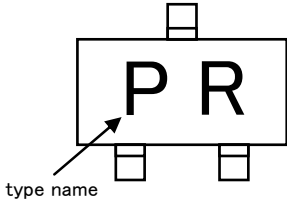
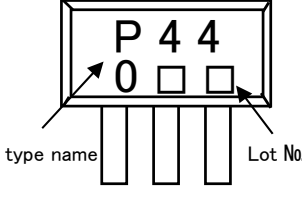
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MARKING

| | |
|---|---|
| RT1P440C RT1P440M RT1P440U | RT1P440S |
|  |  |

MAXIMUM RATING (Ta=25°C)

| SYMBOL | PARAMETER | RATING | | | | UNIT |
|------------------|--------------------------------|----------|----------|----------|----------|------|
| | | RT1P440U | RT1P440M | RT1P440C | RT1P440S | |
| V _{CBO} | Collector to Base voltage | -50 | | | | V |
| V _{EBO} | Emitter to Base voltage | -6 | | | | V |
| V _{CEO} | Collector to Emitter voltage | -50 | | | | V |
| I _C | Collector current | -100 | | | | mA |
| I _{CM} | Peak Collector current | -200 | | | | mA |
| P _C | Collector dissipation(Ta=25°C) | 150 | 200 | | 450 | mW |
| T _j | Junction temperature | +150 | | | | °C |
| T _{stg} | Storage temperature | -55~+150 | | | | °C |

ELECTRICAL CHARACTERISTICS (Ta=25°C)

| SYMBOL | PARAMETER | TEST CONDITION | LIMIT | | | UNIT |
|---------------|---------------------------|-------------------------------------|-------|-----|------|------------|
| | | | MIN | TYP | MAX | |
| $V_{(BR)CEO}$ | C to E break down voltage | $I_C = -100 \mu A, R_{BE} = \infty$ | -50 | — | — | V |
| I_{CBO} | Collector cut off current | $V_{CB} = -50V, I_E = 0$ | — | — | -0.1 | μA |
| I_{EBO} | Emitter cut off current | $V_{EB} = -5V, I_C = 0$ | — | — | -0.1 | μA |
| h_{FE} | DC forward current gain | $V_{CE} = -5V, I_C = -1mA$ | 100 | — | — | — |
| $V_{CE(sat)}$ | C to E saturation voltage | $I_C = -10mA, I_B = -0.5mA$ | — | — | -0.3 | V |
| R_1 | Input resistor | — | 33 | 47 | 61 | k Ω |
| f_T | Gain band width product | $V_{CE} = -6V, I_E = 10mA$ | — | 150 | — | MHz |

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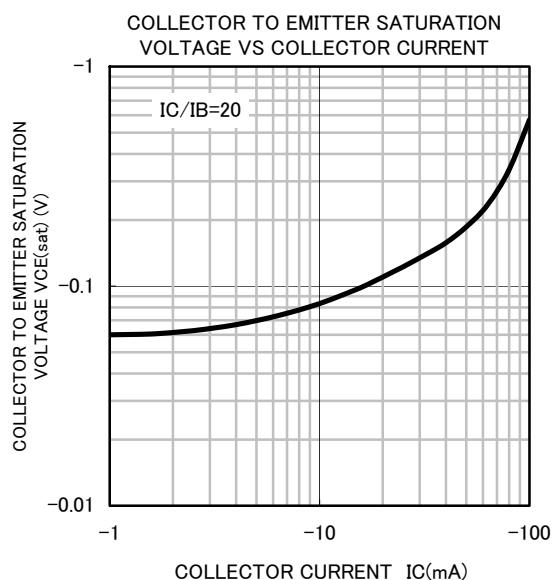
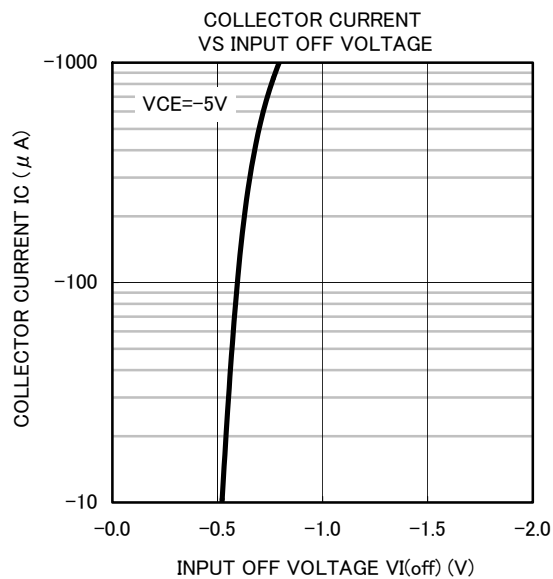
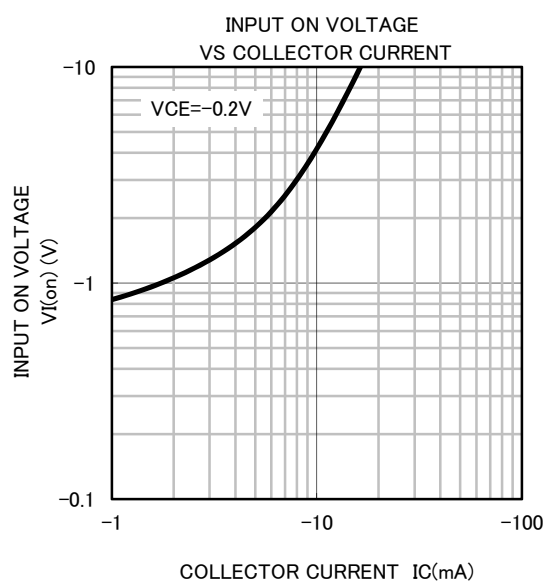
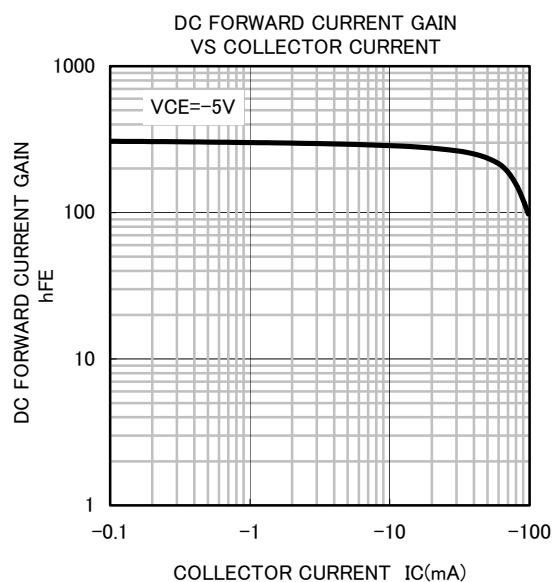
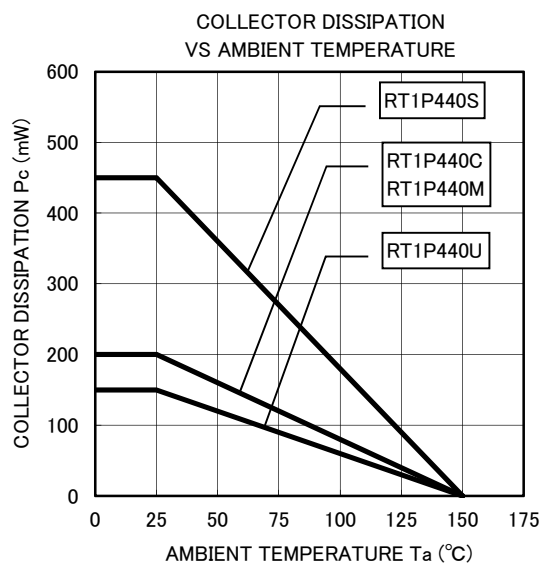
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TYPICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)





Keep safety first in your circuit designs!

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