

# RT1N430X SERIES

<Transistor>

Transistor With Resistor  
For Switching Application  
Silicon NPN Epitaxial Type

## DESCRIPTION

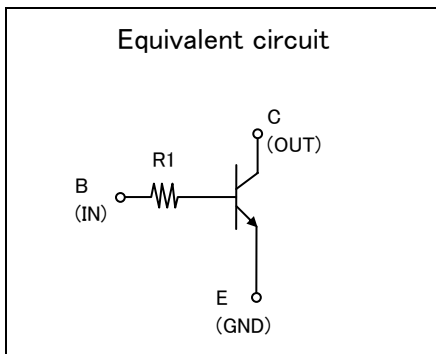
RT1N430X is a one chip transistor with built-in bias resistor, PNP type is RT1P430X.

## FEATURE

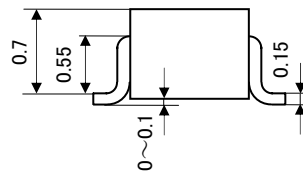
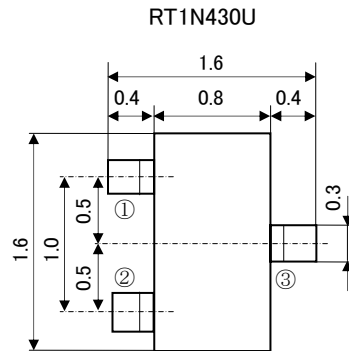
- Built-in bias resistor ( $R1=4.7k\Omega$ )

## APPLICATION

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



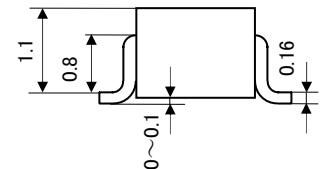
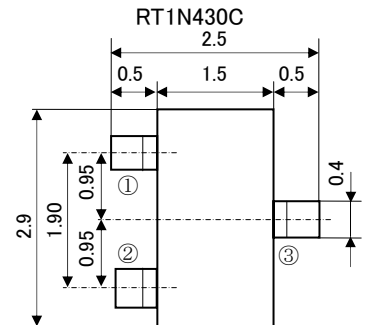
## OUTLINE DRAWING UNIT : mm



JEITA: —  
JEDEC: —

Terminal Connector

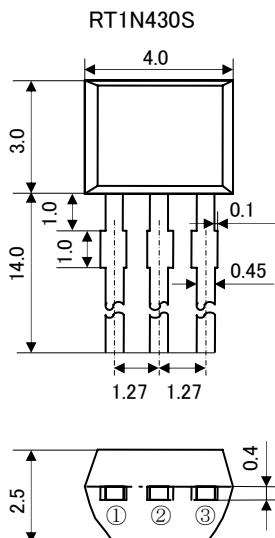
- ①: Base
- ②: Emitter
- ③: Collector



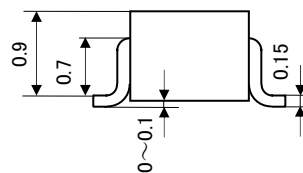
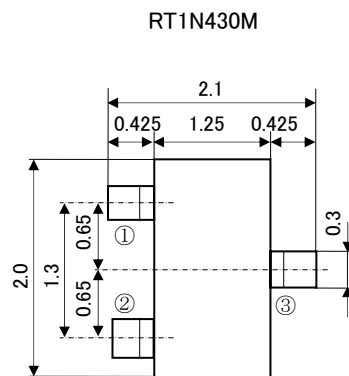
JEITA: SC-59  
JEDEC: Similar to TO-236

Terminal Connector

- ①: Base
- ②: Emitter
- ③: Collector



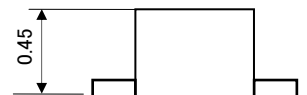
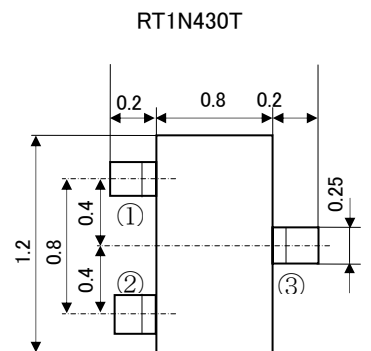
JEITA: —  
JEDEC: —  
Terminal Connector  
①: Emitter  
②: Collector  
③: Base



JEITA: SC-70  
JEDEC: —

Terminal Connector

- ①: Base
- ②: Emitter
- ③: Collector



JEITA: —  
JEDEC: —

Terminal Connector

- ①: Base
- ②: Emitter
- ③: Collector

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## MAXIMUM RATING (Ta=25°C)

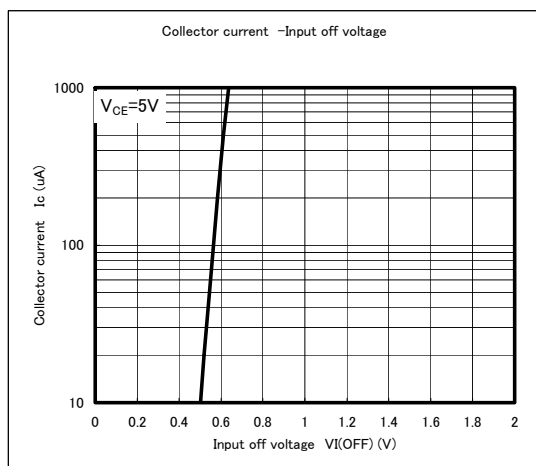
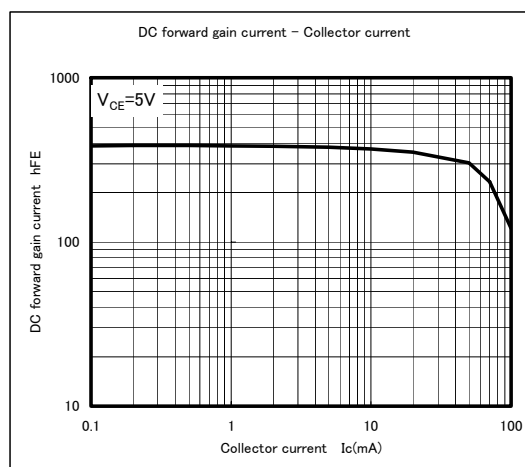
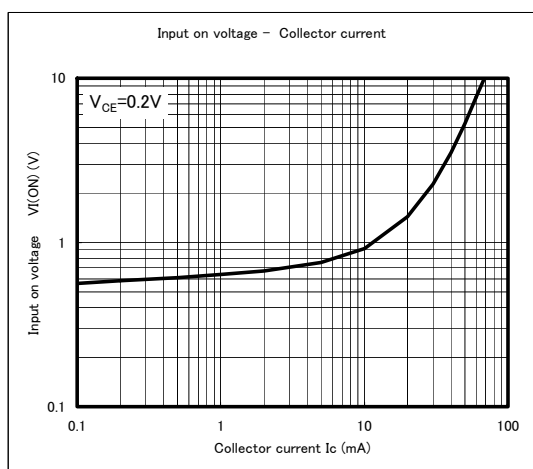
| SYMBOL    | PARAMETER                      | RATING   |          |          |          |          | UNIT |
|-----------|--------------------------------|----------|----------|----------|----------|----------|------|
|           |                                | RT1N430T | RT1N430U | RT1N430M | RT1N430C | RT1N430S |      |
| $V_{CBO}$ | 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) | 125 (※)  | 150      | 200      | 450      | mW       |      |
| $T_j$     | Junction temperature           | +125     | +150     |          |          | °C       |      |
| $T_{stg}$ | Storage temperature            | -55~+125 |          | -55~+150 |          | °C       |      |

(※) package mounted on 9mm × 19mm × 1mm glass-epoxy substrate.

## 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 | $\mu A$    |
| $h_{FE}$      | DC forward current gain   | $V_{CE}=5V, I_C=1mA$          | 100   |     |     | —          |
| $V_{CE(sat)}$ | C to E saturation voltage | $I_C=10mA, I_B=0.5mA$         |       | 0.1 | 0.3 | V          |
| $R_1$         | Input resistance          |                               | 3.3   | 4.7 | 6.1 | k $\Omega$ |
| $f_T$         | Gain band width product   | $V_{CE}=6V, I_E=-10mA$        |       | 200 |     | MHz        |

## TYPICAL CHARACTERISTICS





*Marketing division, Marketing planning department*

6-41 Tsukuba, Isahaya, Nagasaki, 854-0065 Japan

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