

# RT2N21M

COMPOSITE TRANSISTOR WITH RESISTOR  
FOR SWITCHING APPLICATION  
SILICON NPN EPITAXIAL TYPE

## DESCRIPTION

RT2N21M is a composite transistor with built-in bias resistor

## FEATURE

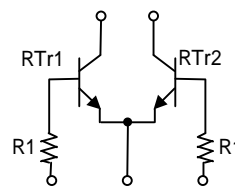
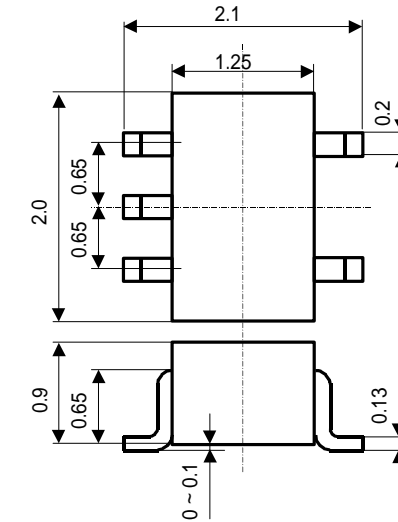
- Built-in bias resistor ( R1=10 K )
- Mini package for easy mounting

## APPLICATION

Inverted circuit , switching circuit , interface circuit , driver circuit

## OUTLINE DRAWING

Unit:mm



### TERMINAL CONNECTOR

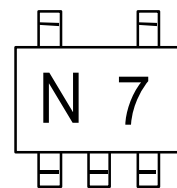
- : BASE 1
- : EMITTER ( COMMON )
- : BASE 2
- : COLLECTOR 2
- : COLLECTOR 1

EIAJ: -  
JEDEC: -

## MAXIMUM RATINGS (Ta=25 °C)(RTr1, RTr2)

| Symbol           | Parameter                              | Ratings     | Unit |
|------------------|--|-------------|------|
| V <sub>CBO</sub> | Collector to Base voltage              | 50          | V    |
| V <sub>EBO</sub> | Emitter to Base voltage                | 6           | V    |
| V <sub>CEO</sub> | Collector to Emitter voltage           | 50          | V    |
| I <sub>C</sub>   | Collector current                      | 100         | mA   |
| I <sub>CM</sub>  | Peak Collector current                 | 200         | mA   |
| P <sub>C</sub>   | Collector dissipation (Total Ta=25 °C) | 150         | mW   |
| T <sub>j</sub>   | Junction temperature                   | + 150       |      |
| T <sub>stg</sub> | Storage temperature                    | -55 ~ + 150 |      |

## MARKING



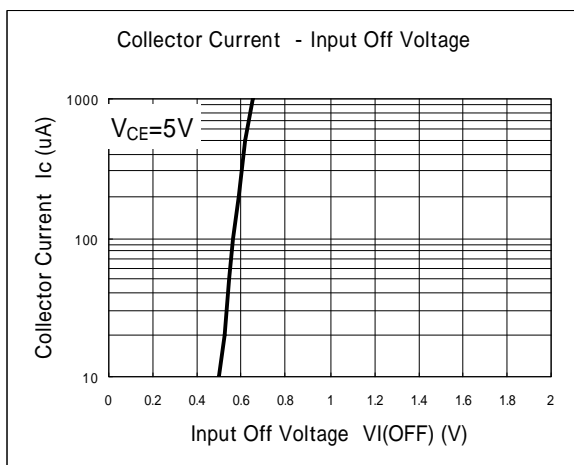
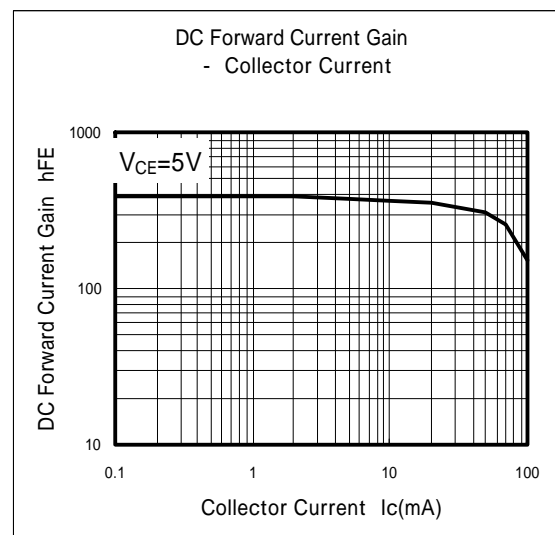
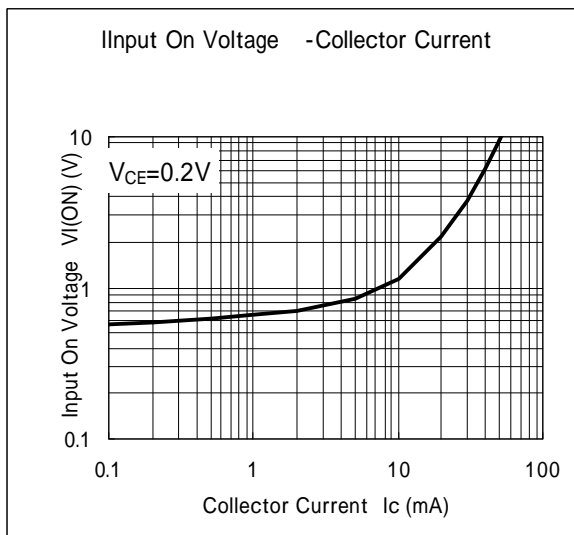
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## ELECTRICAL CHARACTERISTICS (Ta=25 °C)(RT1, RT2)

| Symbol        | Parameter                 | Test conditions                | Limits |     |     | Unit    |
|---------------|---------------------------|--------------------------------|--------|-----|-----|---------|
|               |                           |                                | Min    | Typ | Max |         |
| $V_{(BR)CBO}$ | 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 resistor            |                                | 7      | 10  | 13  | K       |
| $f_T$         | Gain band width product   | $V_{CE}=6V, I_E=-10mA$         |        | 200 |     | MHz     |

## TYPICAL CHARACTERISTICS (Tr1, Tr2)





*Marketing division, Marketing planning department*

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

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