## RT2N63M

Composite Transistor For Muting Application Silicon NPN Epitaxial Type

#### **DESCRIPTION**

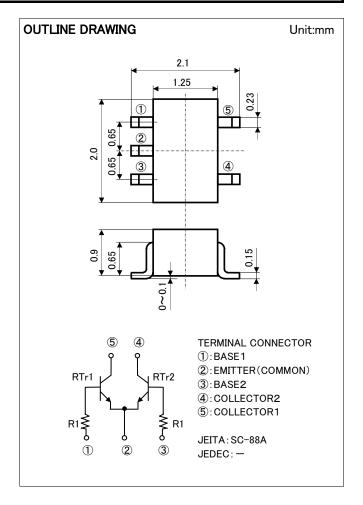
RT2N63M is a composite transistor with built-in bias resistor  $% \left( 1\right) =\left( 1\right) \left( 1\right$ 

### **FEATURE**

- Built-in bias resistor (  $R_1$ =4.7 k  $\Omega$ )
- Mini package for easy mounting

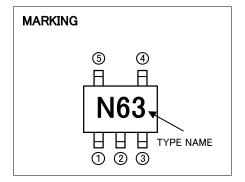
### **APPLICATION**

muting circuit, switching circuit



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

| Symbol           | Parameter                    | Ratings           | Unit |
|------------------|------------------------------|-------------------|------|
| $V_{CBO}$        | Collector to Base voltage    | 40                | ٧    |
| $V_{\text{EBO}}$ | Emitter to Base voltage      | 40                | ٧    |
| $V_{\text{CEO}}$ | Collector to Emitter voltage | 20                | ٧    |
| I <sub>C</sub>   | Collector current            | 400               | mA   |
| $P_{T}$          | Total dissipation            | 150               | mW   |
| T <sub>j</sub>   | Junction temperature         | +150              | °C   |
| $T_{stg}$        | Storage temperature          | -55 <b>~</b> +150 | °C   |



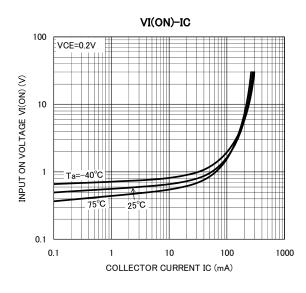
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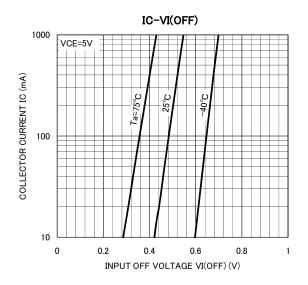
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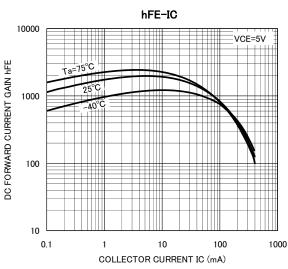
# ELECTRICAL CHARACTERISTICS (Ta=25°C)(RTr1, RTr2 Common)

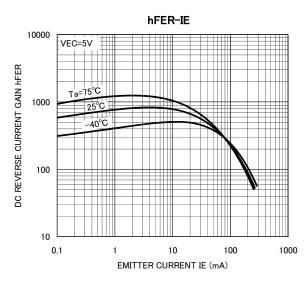
| Symbol               | Parameter                            | Task and division                                     | Limits |      |      | I I - i a |
|----------------------|--------------------------------------|---|--------|------|------|-----------|
|                      |                                      | Test conditions                                       | Min    | Тур  | Max  | Unit      |
| V <sub>CBO</sub>     | Collector-base breakdown voltage     | $I_{c}=50 \mu A, I_{E}=0mA$                           | 40     | -    | _    | ٧         |
| $V_{EBO}$            | Emitter-base breakdown voltage       | $I_E=50 \mu A, I_C=0mA$                               | 40     | -    | _    | <b>\</b>  |
| $V_{\text{CEO}}$     | Collector-emitter breakdown voltage  | I <sub>C</sub> =1mA, R <sub>BE</sub> =∞               | 20     | -    | _    | <b>\</b>  |
| $I_{\text{CBO}}$     | Collector cutoff current             | $V_{CB}$ =40V, $I_{E}$ =0mA                           | _      | -    | 0.5  | μΑ        |
| $I_{EBO}$            | Emitter cutoff current               | $V_{EB}$ =40V, $I_{C}$ =0mA                           | _      | -    | 0.5  | μΑ        |
| h <sub>FE</sub>      | DC current transfer ratio            | $V_{CE}$ =5V, $I_{C}$ =-10mA                          | 820    | -    | 2500 | -         |
| $V_{\text{CE(sat)}}$ | Collector-emitter saturation voltage | $I_C=10$ mA, $I_B=0.5$ mA                             | _      | 10   | _    | mV        |
| R <sub>1</sub>       | Input resistor                       | -   | 3.29   | 4.7  | 6.11 | kΩ        |
| f <sub>T</sub>       | Transition frequency                 | V <sub>CE</sub> =10V, I <sub>E</sub> =-10mA, f=100MHz | -      | 38   | _    | MHz       |
| R <sub>on</sub>      | Output On-resistor                   | V <sub>I</sub> =5V, f=1MHz                            | _      | 0.80 | _    | Ω         |

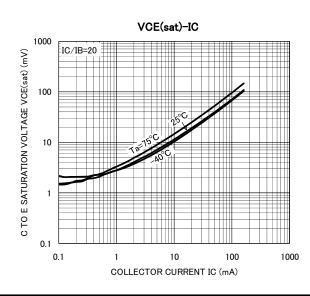
# TYPICAL CHARACTERISTICS (RTr1, RTr2 Common)

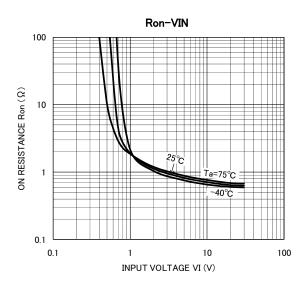














#### Keep safety first in your circuit designs!

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