

RT3TDDM

Composite Transistor With Resistor
For Switching Application
Silicon Epitaxial Type

DESCRIPTION

RT3TBBM is a composite transistor built with RT1N237 chip and RT1P237 chip in SC-88 package.

FEATURE

- Silicon epitaxial type
- Each transistor elements are independent.
- Mini package for easy mounting

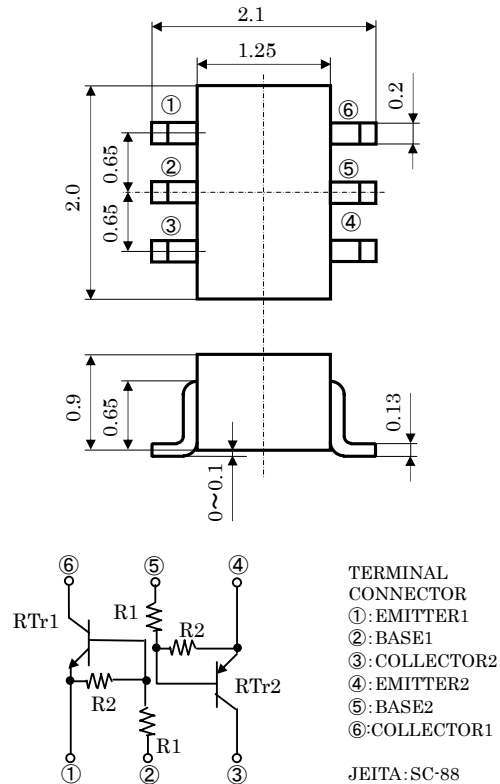
APPLICATION

Inverted circuit, switching circuit,
interface circuit, driver circuit

※PNP built in transistor of "–" sign is abbreviation.

OUTLINE DRAWING

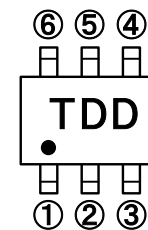
Unit: mm



MAXIMUM RATING (Ta=25°C) (The characteristics apply to both Tr1 and Tr2.)

| SYMBOL | PARAMETER | RATING | UNIT |
|------------------|--|----------|------|
| V _{CBO} | Collector to Base voltage | 50 | V |
| V _{EBO} | Emitter to Base voltage | 6 | V |
| V _{CEO} | Collector to Emitter voltage | 50 | V |
| V _{IN} | Input voltage | 12 | V |
| I _C | Collector current | 100 | mA |
| I _{CM} | Peak Collector current | 200 | mA |
| P _C | Collector dissipation (Total, Ta=25°C) | 150 | mW |
| T _j | Junction temperature | +150 | °C |
| T _{stg} | Storage temperature | -55~+150 | °C |

MARKING



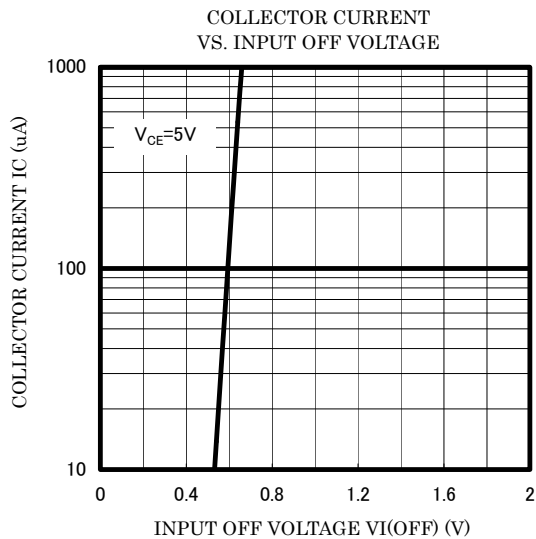
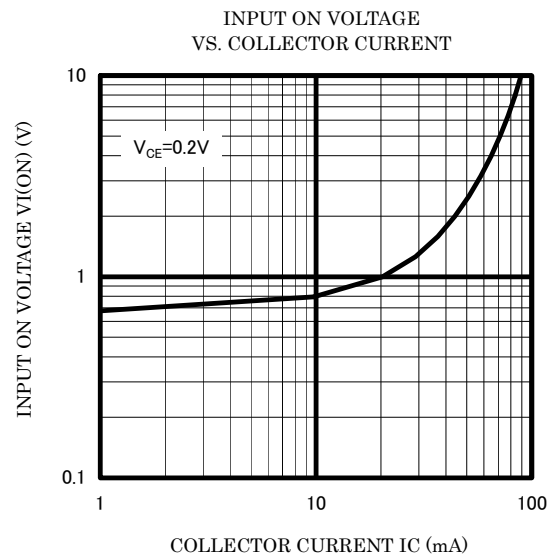
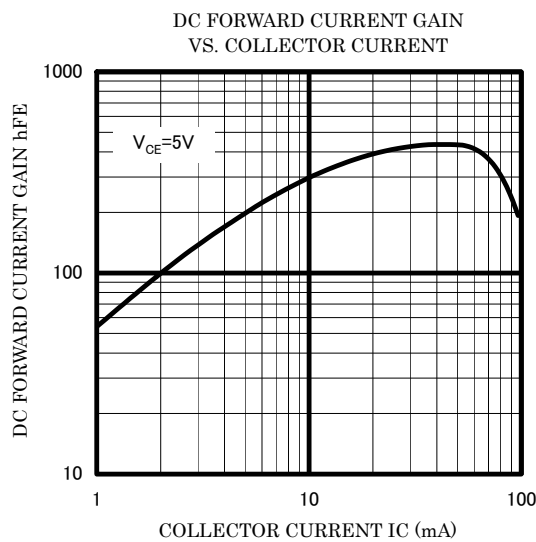
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ELECTRICAL CHARACTERISTICS (Ta=25°C)

| Symbol | Parameter | Test conditions | Limits | | | Unit | |
|----------|---|-------------------------------|--------|-----|-----|------------|-----|
| | | | MAX | TYP | MIN | | |
| V(BR)CEO | Collector to Emitter break down voltage | $I_C=100\mu A, R_{BE}=\infty$ | 50 | — | — | V | |
| ICBO | Collector cut off current | $V_{CB}=50V, I_E=0mA$ | — | — | 0.1 | μA | |
| hFE | DC forward current gain | $V_{CE}=5V, I_C=10mA$ | 80 | — | — | - | |
| VCE(sat) | Collector to Emitter saturation voltage | $I_C=10mA, I_B=0.5mA$ | — | — | 0.3 | V | |
| VI(ON) | Input on voltage | $V_{CE}=0.2V, I_C=5mA$ | — | 0.7 | 1.1 | V | |
| VI(OFF) | Input off voltage | $V_{CE}=5V, I_C=100\mu A$ | 0.5 | 0.6 | — | V | |
| R1 | Input resistor | — | 1.5 | 2.2 | 2.9 | K Ω | |
| R2/R1 | Resistor ratio | — | — | 22 | — | — | |
| fT | Gain band width product | $V_{CE}=6V, I_E=10mA$ | Tr1 | — | 200 | — | MHz |
| | | | Tr2 | — | 150 | — | |

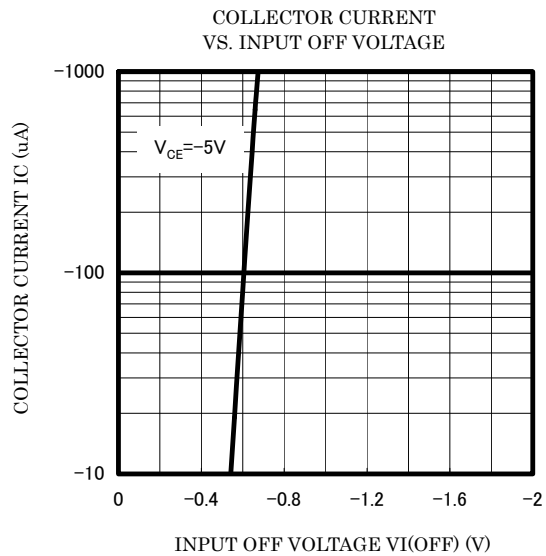
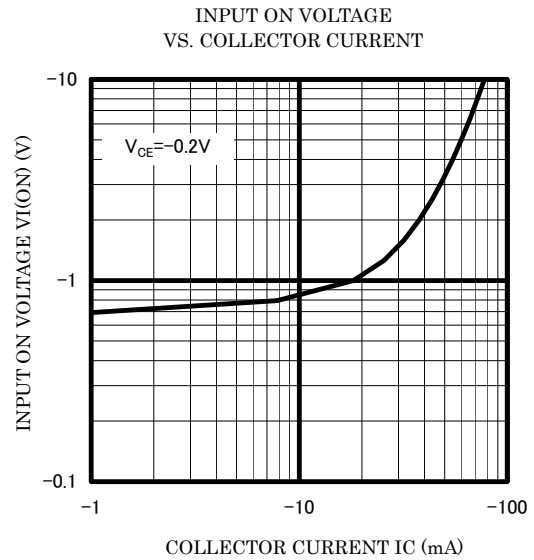
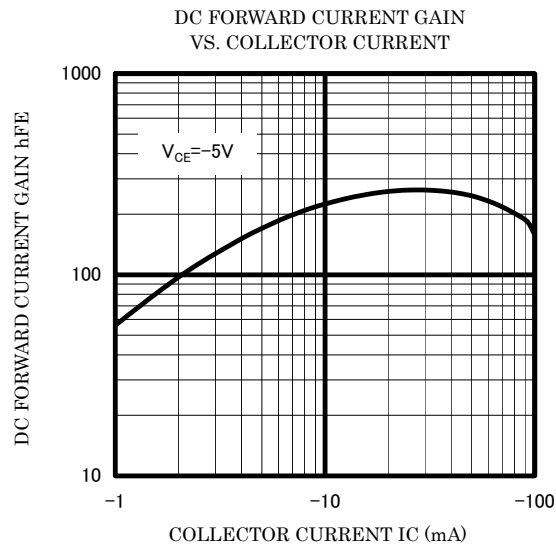
TYPICAL CHARACTERISTICS (Tr1)



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TYPICAL CHARACTERISTICS (T_r2)





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