# RT3NDDM

Composite Transistor With Resistor
For Switching Application
Silicon NPN Epitaxial Type

## DESCRIPTION

RT3NDDM is a composite transistor built with two RT1N237 chips in SC-88 package.

## FEATURE

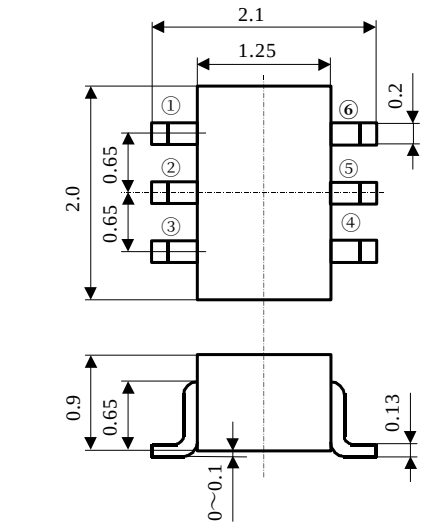
Silicon NPN epitaxial type
Built in bias resistor (R1=2.2kΩ, R2=47kΩ)
Each transistor elements are independent.
Mini package for easy mounting

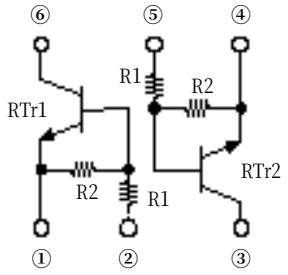
## APPLICATION

Inverted circuit, switching circuit,
interface circuit, driver circuit

## OUTLINE DRAWING

Unit: mm



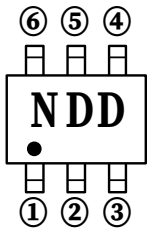

TERMINAL CONNECTOR
①: EMITTER1
②: BASE1
③: COLLECTOR2
④: EMITTER2
⑤: BASE2
⑥:COLLECTOR1

JEITA: SC-88

## MAXIMUM RATING (Ta=25℃)

| SYMBOL | PARAMETER | RATING | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Collector to Base voltage | 50 | V |
| $V_{EBO}$ | Emitter to Base voltage | 10 | 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 (Total, Ta=25℃) | 150 | mW |
| $T_j$ | Junction temperature | +150 | ℃ |
| $T_{stg}$ | Storage temperature | -55～+150 | ℃ |

## MARKING



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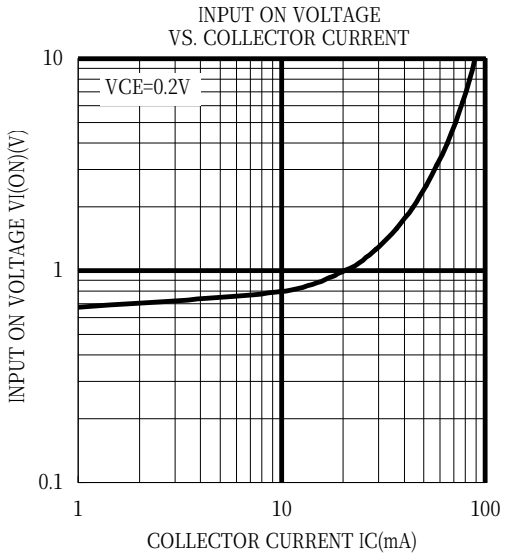
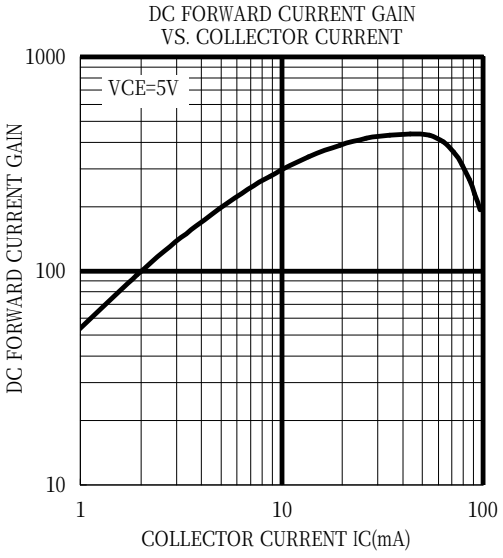
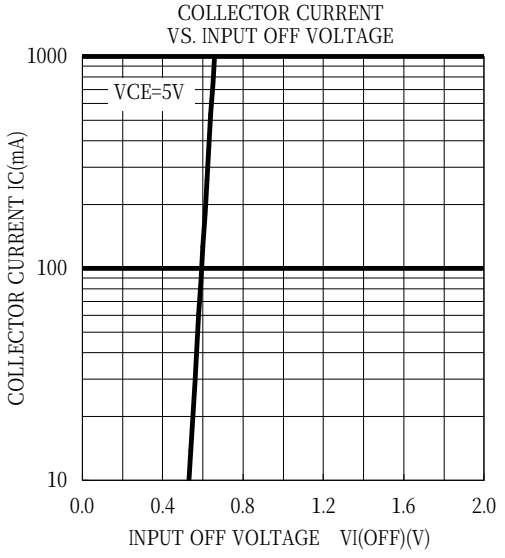
## ELECTRICAL CHARACTERISTICS (Ta=25℃)

| Symbol | Parameter | Test conditions | Limits | | | Unit |
|---|---|---|---|---|---|---|
| | | | Min | Typ | Max | |
| $V_{(BR)CEO}$ | Collector to Emitter break down voltage | $I_C$=100 μA,$R_{BE}$=∞ | 50 | - | - | V |
| $I_{CBO}$ | Collector cut off current | $V_{CB}$=50V,$I_E$=0 | - | - | 0.1 | μA |
| $h_{FE}$ | DC forward current gain | $V_{CE}$=5V,$I_C$=10mA | 80 | - | - | - |
| $V_{CE(sat)}$ | Collector to Emitter saturation voltage | $I_C$=10mA,$I_B$=0.5mA | - | 0.1 | 0.3 | V |
| $V_{I(ON)}$ | Input on voltage | $V_{CE}$=0.2V,$I_C$=5mA | - | 0.7 | 1.1 | V |
| $V_{I(OFF)}$ | Input off voltage | $V_{CE}$=5V,$I_C$=100 μA | 0.5 | 0.6 | - | V |
| $R_1$ | Input resistor | - | 1.5 | 2.2 | 2.9 | kΩ |
| $R_2/R_1$ | Resistor ratio | - | 17 | 22 | 26 | - |
| $f_T$ | Gain band width product | $V_{CE}$=6V,$I_E$=-10mA | - | 200 | - | $MH_Z$ |

TYPICAL CHARACTERISTICS ( Tr1, Tr2 )



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