# RT3T66M

Composite Transistor With Resistor
For Switching Application
Silicon Epitaxial Type

## DESCRIPTION

RT3T66M is composite transistor built with RT1N430 chip and RT1P430 chip in SC-88 package.

## FEATURE

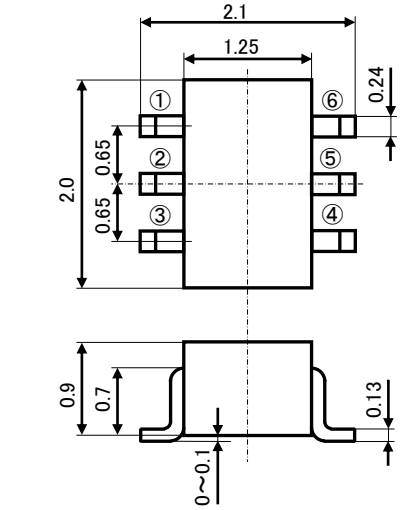
Built-in bias resistor (R1=4.7kΩ)
Mini package for easy mounting

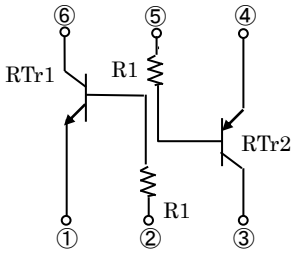
## APPLICATION

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

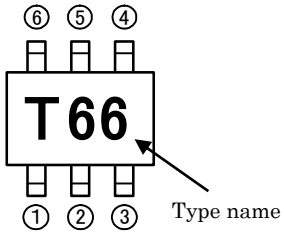
JEITA:SC-88
JEDEC:－

## MAXIMUM RATING (Ta=25℃) (RTr1_NPN, RTr2_PNP)

| 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 |
| $I_C$ | Collector current | 100 | mA |
| $I_{CM}$ | Peak Collector current | 200 | mA |
| $P_T$ | Total dissipation | 200 | mW |
| $T_j$ | Junction temperature | ＋150 | ℃ |
| $T_{stg}$ | Storage temperature | -55～＋150 | ℃ |

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

## MARKING

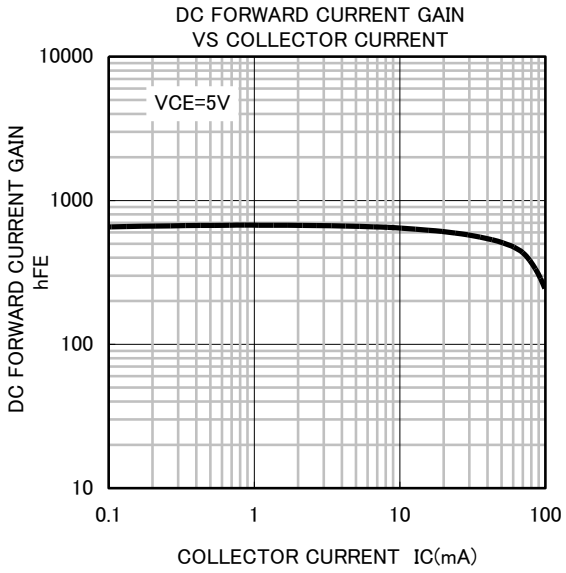


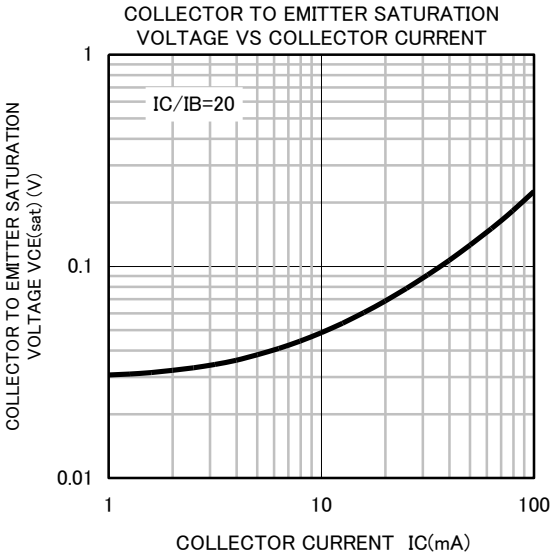

## ELECTRICAL CHARACTERISTICS (Ta=25℃) (RTr1_NPN, RTr2_PNP)

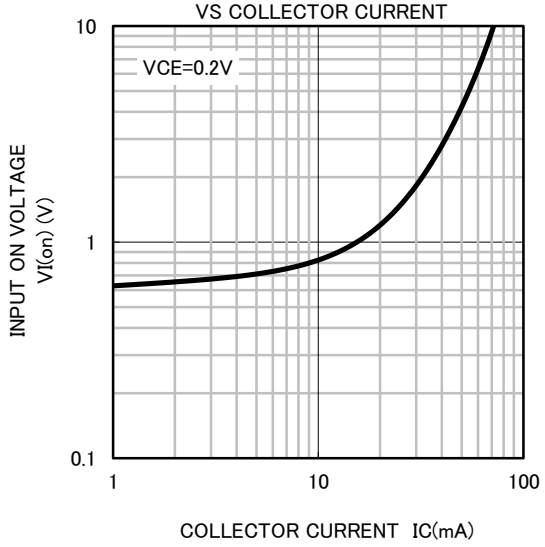
| Symbol | Parameter | Test conditions | | Limits | | | Unit |
|---|---|---|---|---|---|---|---|
| | | | | Min | Typ | Max | |
| $V_{(BR)CEO}$ | Collector to Emitter breakdown voltage | $I_C$=100μA, $R_{BE}$=∞ | | 50 | － | － | V |
| $I_{CBO}$ | Collector cut off current | $V_{CB}$=50V, $I_E$=0 | | － | － | 0.1 | μA |
| $I_{EBO}$ | Emitter cut off current | $V_{EB}$=5V, $I_C$=0 | | － | － | 0.1 | μA |
| $h_{FE}$ | DC forward current gain | $V_{CE}$=5V, $I_C$=1mA | | 100 | － | － | － |
| $V_{CE(sat)}$ | Collector to Emitter saturation voltage | $I_C$=10mA, $I_B$=0.5mA | | － | － | 0.3 | V |
| $R_1$ | Input resistor | － | | 3.3 | 4.7 | 6.1 | kΩ |
| $f_T$ | Gain band width product | $V_{CE}$=6V, $I_E$=10mA | RTr1 | － | 200 | － | MHz |
| | | | RTr2 | － | 150 | － | |

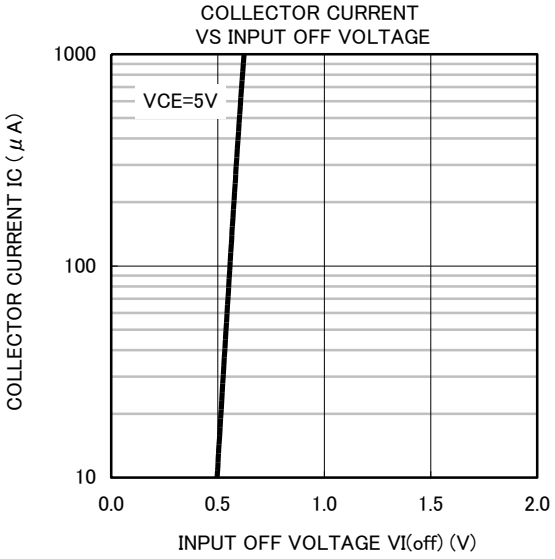
※PNP built in transistor of"－"sign is abbreviation.

TYPICAL CHARACTERISTICS(Ta=25℃)(RTr1_NPN)



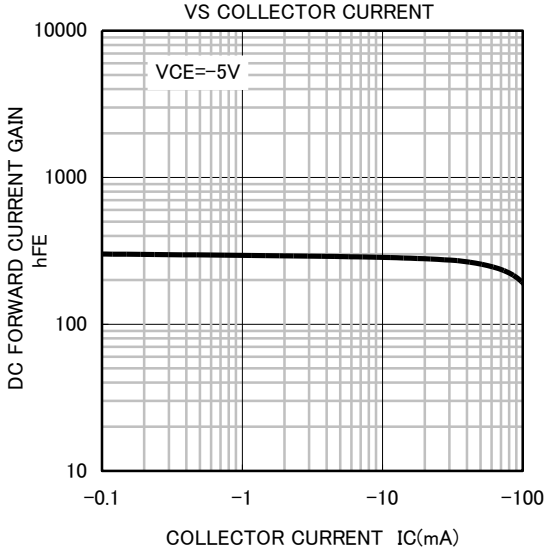



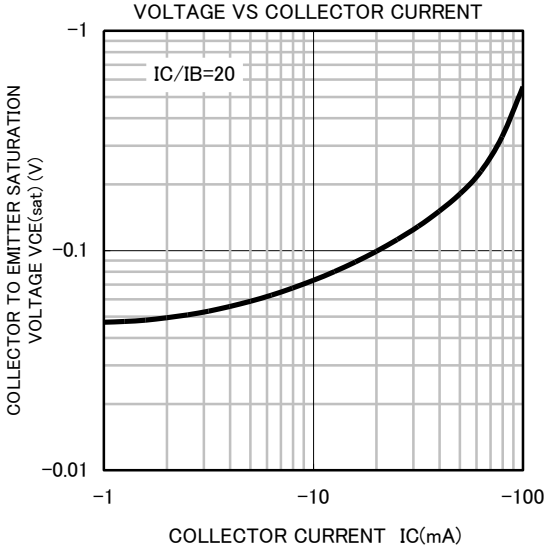



TYPICAL CHARACTERISTICS(Ta=25℃)(RTr 2_PNP)

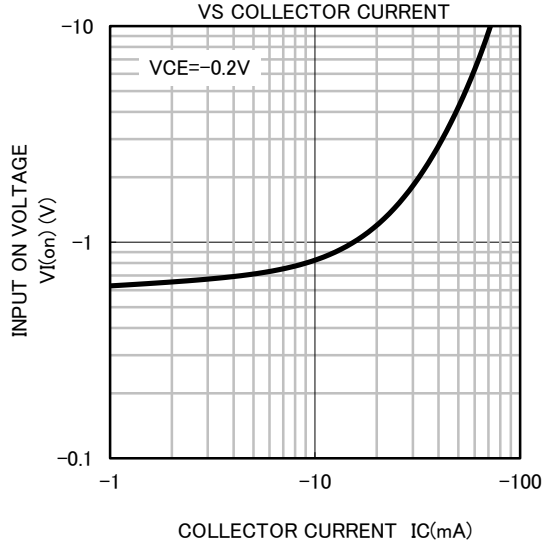
DC FORWARD CURRENT GAIN
VS COLLECTOR CURRENT



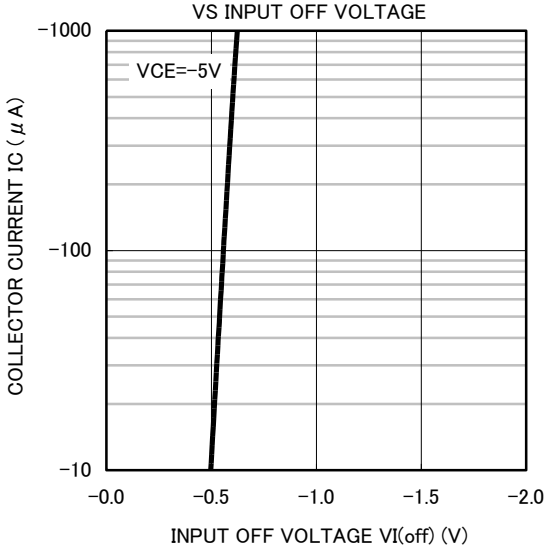

COLLECTOR TO EMITTER SATURATION
VOLTAGE VS COLLECTOR CURRENT



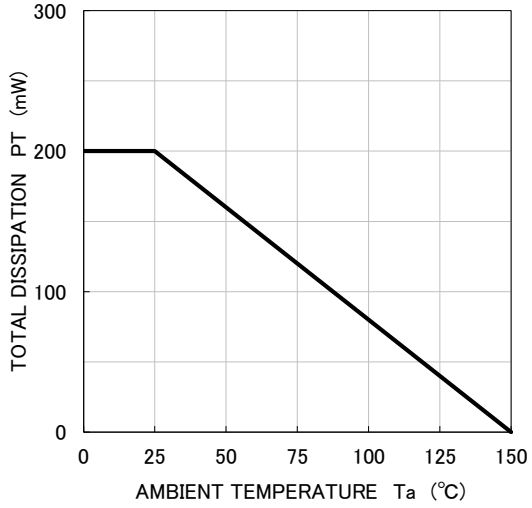

INPUT ON VOLTAGE
VS COLLECTOR CURRENT




COLLECTOR CURRENT
VS INPUT OFF VOLTAGE




TOTAL DISSIPATION
VS AMBIENT TEMPERATURE



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