

RT5N234C

Transistor With Resistor
For Switching Application
Silicon NPN Epitaxial Type

DESCRIPTION

RT5N234C is a one chip transistor with built-in bias resistor.

FEATURE

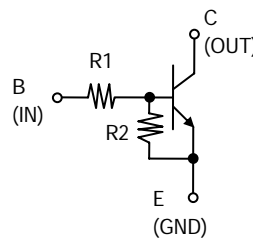
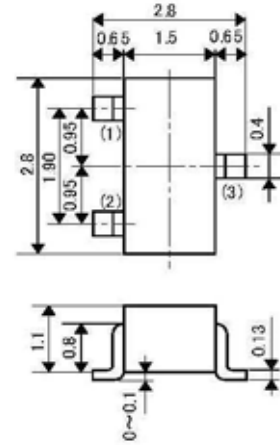
Built-in bias resistor ($R_1=2.2k$, $R_2=10k$)
High collector current ($I_c=0.5A$)
Mini package for easy mounting

APPLICATION

Inverted circuit, Switching circuit, Interface circuit,
Driver circuit

OUTLINE DRAWING

Unit: mm

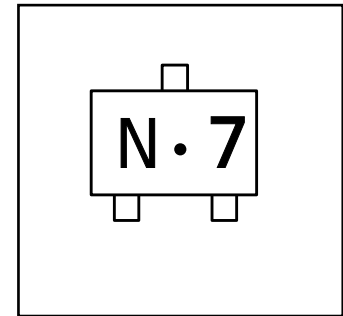


JEITA SC-59

BASE
EMITTER
COLLECTOR

MAXIMUM RATING ($T_a=25$)

| SYMBOL | PARAMETER | RATING | UNIT |
|-----------|-----------------------------------|------------|------|
| V_{CBO} | Collector to Base voltage | 50 | V |
| V_{EBO} | Emitter to Base voltage | 5 | V |
| V_{IN} | Input voltage | 12 | V |
| V_{CEO} | Collector to Emitter voltage | 50 | V |
| I_C | Collector current | 500 | mA |
| P_C | Collector dissipation($T_a=25$) | 200 | mW |
| T_j | Junction temperature | 150 | |
| T_{stg} | Storage temperature | -55 ~ +150 | |



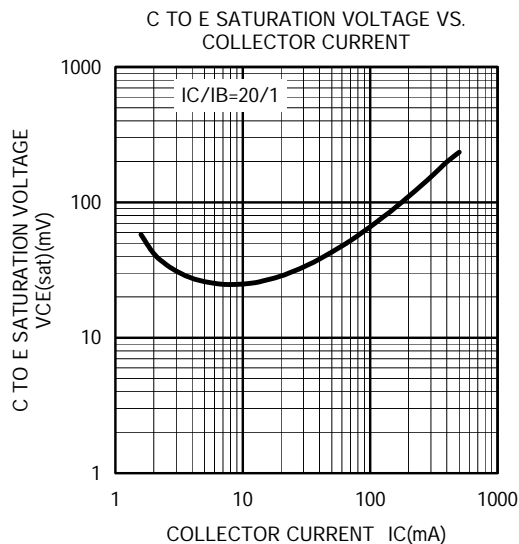
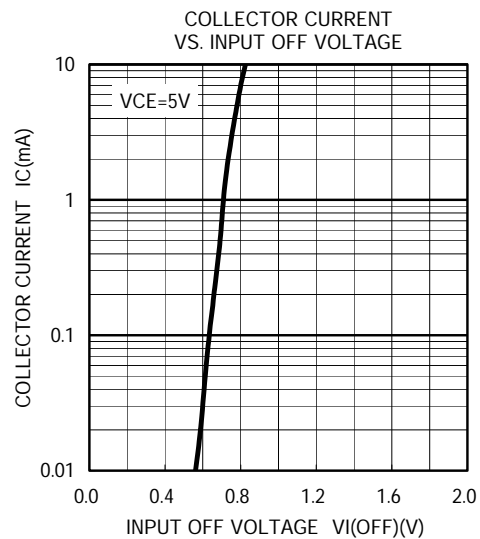
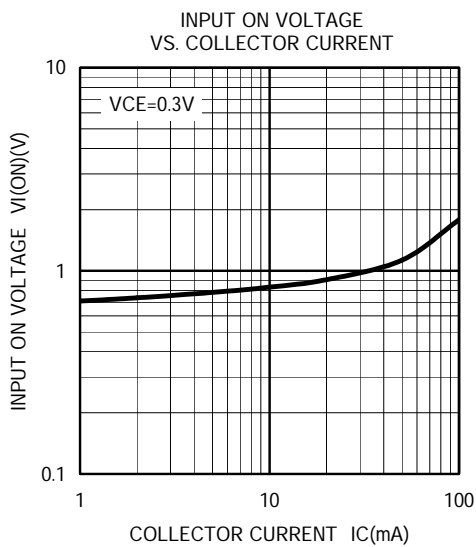
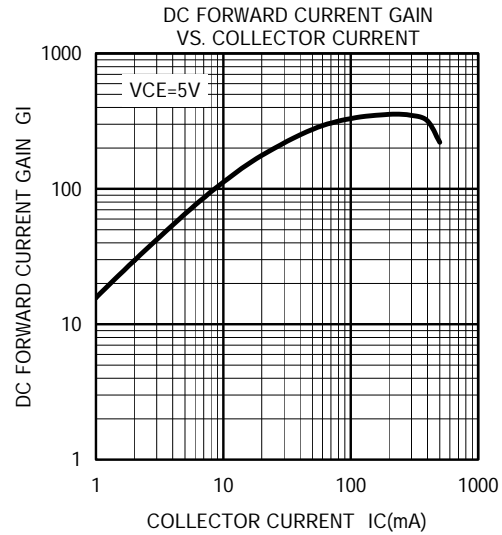
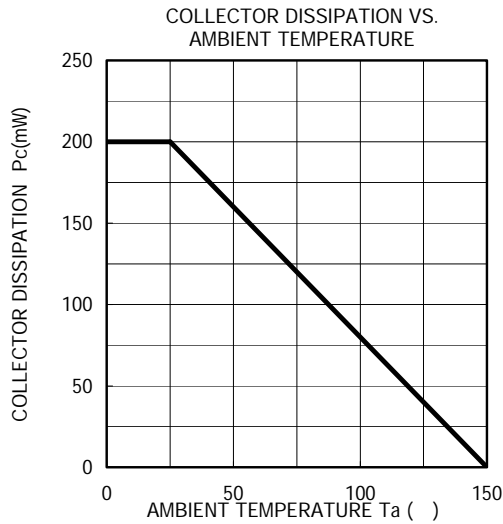
ELECTRICAL CHARACTERISTICS ($T_a=25$)

| SYMBOL | PARAMETER | TEST CONDITION | LIMIT | | | UNIT |
|---------------|---------------------------|--|-------|-----|------|---------|
| | | | MIN | TYP | MAX | |
| $V_{I(on)}$ | Input on voltage | $V_{CE}=0.3V$, $I_C=20mA$ | — | — | 2 | V |
| $V_{I(off)}$ | Input off voltage | $V_{CE}=5V$, $I_C=100\mu A$ | 0.3 | — | — | V |
| $V_{CE(sat)}$ | C to E saturation voltage | $I_C=50mA$, $I_B=2.5mA$ | — | 0.1 | 0.3 | V |
| I_{BE} | B to E current | $V_{BE}=5V$ | — | — | 3.6 | mA |
| I_{CES} | Collector cut off current | $V_{CE}=50V$, $V_{BE}=0V$ | — | — | 0.5 | μA |
| G_I | DC forward current gain | $V_{CE}=5V$, $I_C=50mA$ | 56 | — | — | |
| R_1 | Input resistor | — | 1.54 | 2.2 | 2.86 | k |
| R_2/R_1 | Resistor ratio | — | 3.6 | 4.5 | 5.5 | |
| f_T | Gain band width product | $V_{CE}=10V$, $I_E=-5mA$, $f=100MHz$ | — | 200 | — | MHz |

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Silicon NPN Epitaxial Type

TYPICAL CHARACTERISTICS





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