

2SC3512

Silicon NPN Epitaxial

REJ03G0714-0300

Rev.3.00

Apr 20, 2006

Application

UHF / VHF wide band amplifier

Outline

RENESAS Package code: PRSS0003DA-C
(Package name: TO-92 (2))

1. Base
2. Emitter
3. Collector

Absolute Maximum Ratings

(Ta = 25°C)

| Item | Symbol | Ratings | Unit |
|------------------------------|-----------|-------------|------|
| Collector to base voltage | V_{CBO} | 15 | V |
| Collector to emitter voltage | V_{CEO} | 11 | V |
| Emitter to base voltage | V_{EBO} | 2 | V |
| Collector current | I_C | 50 | mA |
| Collector power dissipation | P_C | 600 | mW |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 to +150 | °C |

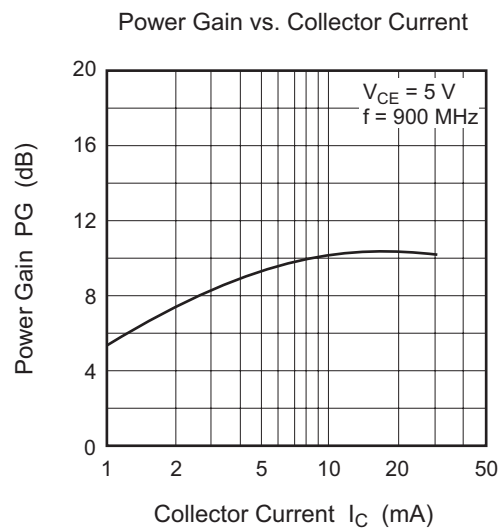
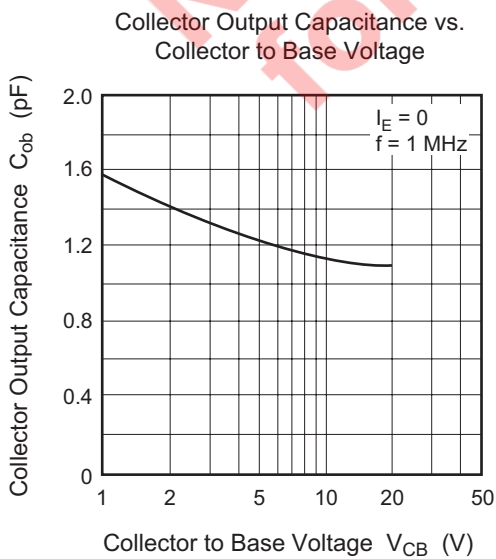
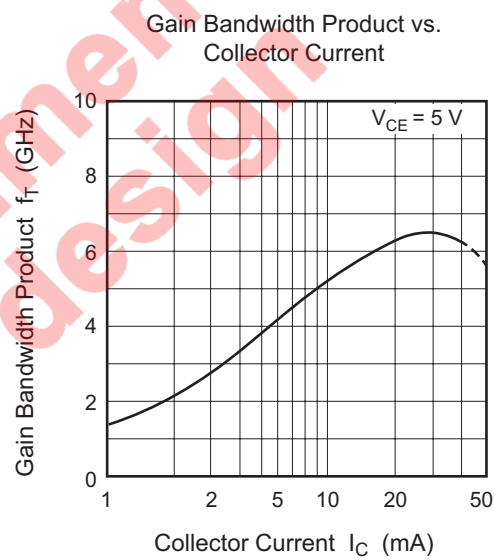
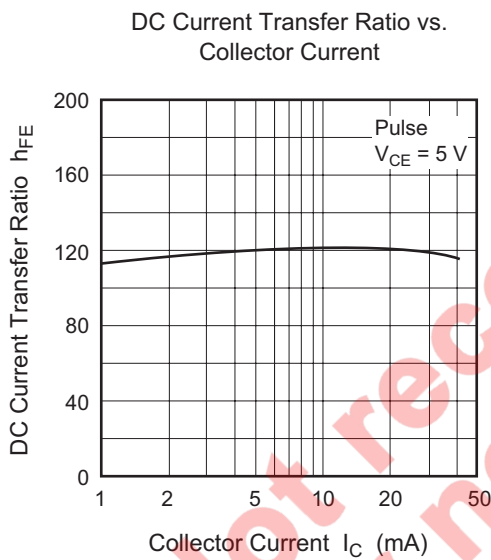
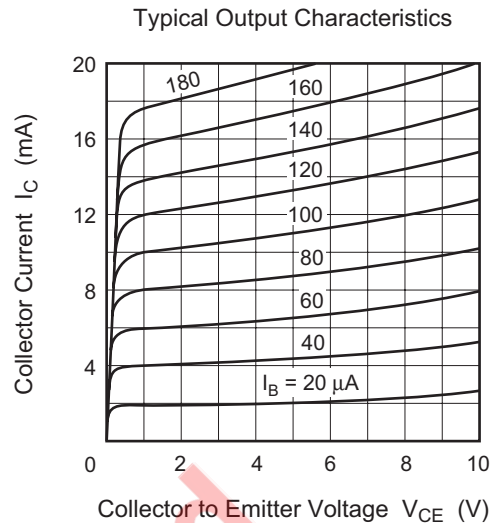
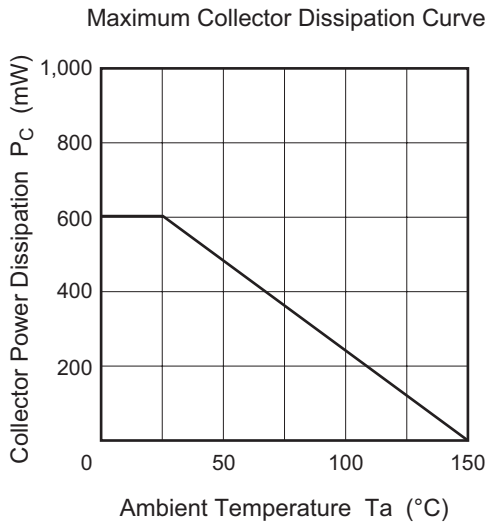
Electrical Characteristics

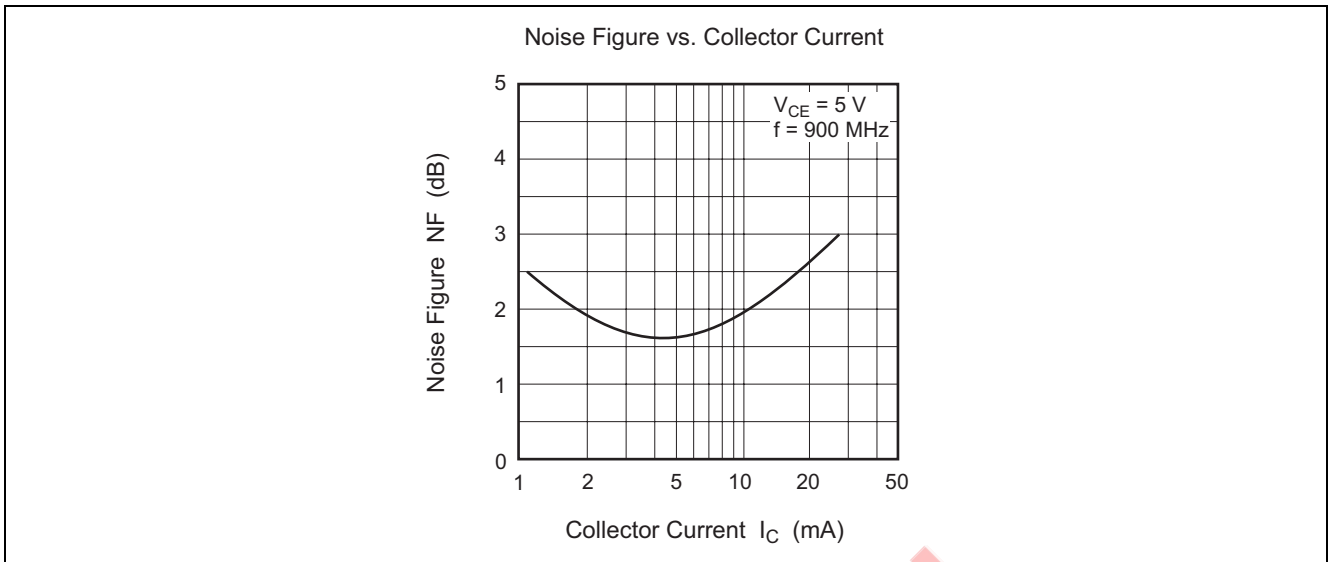
(Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|-------------------------------------|---------------|-----|------|-----|---------|---|
| Collector to base breakdown voltage | $V_{(BR)CBO}$ | 15 | — | — | V | $I_C = 10 \mu A, I_E = 0$ |
| Collector to cutoff current | I_{CEO} | — | — | 1 | μA | $V_{CE} = 10 V, R_{BE} = \infty$ |
| Emitter cutoff current | I_{EBO} | — | — | 1 | μA | $V_{EB} = 1 V, I_C = 0$ |
| Collector cutoff current | I_{CBO} | — | — | 1 | μA | $V_{CB} = 12 V, I_E = 0$ |
| DC current transfer ratio | h_{FE} | 50 | 120 | 250 | | $V_{CE} = 5 V, I_C = 20 mA$ |
| Collector output capacitance | C_{ob} | — | 1.2 | 1.6 | pF | $V_{CB} = 5 V, I_E = 0, f = 1 MHz$ |
| Gain bandwidth product | f_T | — | 6.0 | — | GHz | $V_{CE} = 5 V, I_C = 20 mA$ |
| Power gain | PG | — | 10.5 | — | dB | $V_{CE} = 5 V, I_C = 20 mA,$ $f = 900 MHz$ |
| Noise figure | NF | — | 1.6 | — | dB | $V_{CE} = 5 V, I_C = 5 mA,$ $f = 900 MHz$ |

Not recommend
for new design

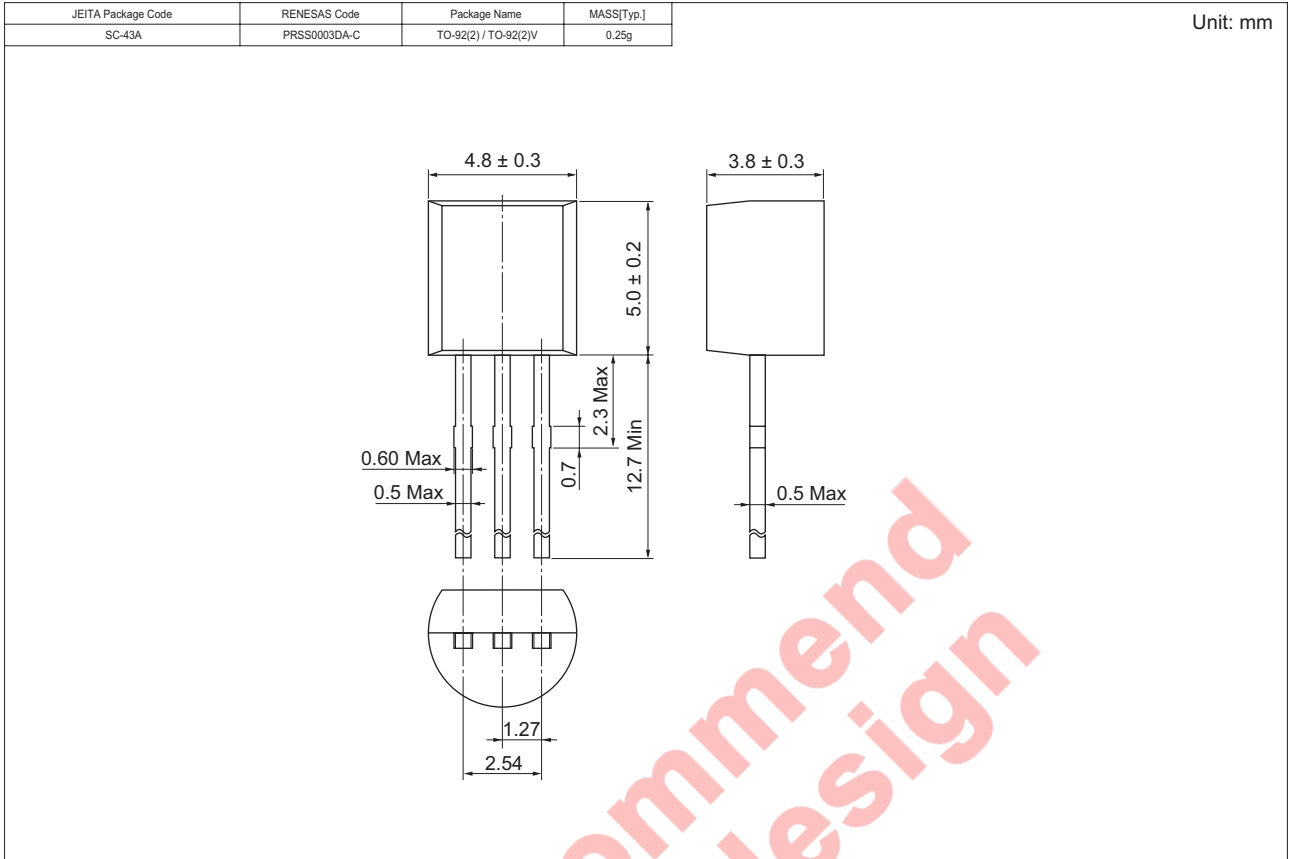
Main Characteristics





Not recommended
for new design

Package Dimensions



Ordering Information

| Part Name | Quantity | Shipping Container |
|-------------|----------|-------------------------|
| 2SC3512TZ-E | 2500 | Hold Box, Radial Taping |

Not recommended for new design

Keep safety first in your circuit designs!

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