

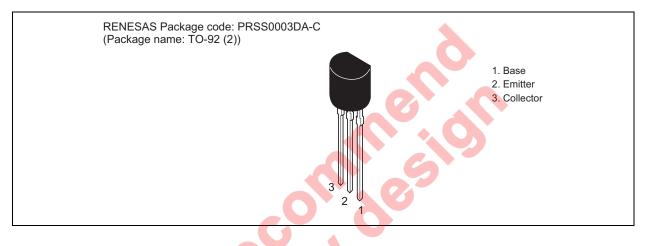
# **2SC4308** Silicon NPN Epitaxial Planar

REJ03G0723-0200 (Previous ADE-208-1103) Rev.2.00 Aug.10.2005

## Application

VHF Wide band amplifier

## Outline



# Absolute Maximum Ratings

|                              |                       |             | $(Ta = 25^{\circ}C)$ |
|------------------------------|-----------------------|-------------|----------------------|
| Item                         | Symbol                | Ratings     | Unit                 |
| Collector to base voltage    | V <sub>CBO</sub>      | 30          | V                    |
| Collector to emitter voltage | V <sub>CEO</sub>      | 20          | V                    |
| Emitter to base voltage      | V <sub>EBO</sub>      | 3           | V                    |
| Collector current            | Ι <sub>C</sub>        | 300         | mA                   |
| Collector peak current       | i <sub>C (peak)</sub> | 500         | mA                   |
| Collector power dissipation  | Pc                    | 600         | mW                   |
| Junction temperature         | Tj                    | 150         | °C                   |
| Storage temperature          | Tstg                  | –55 to +150 | °C                   |



## **Electrical Characteristics**

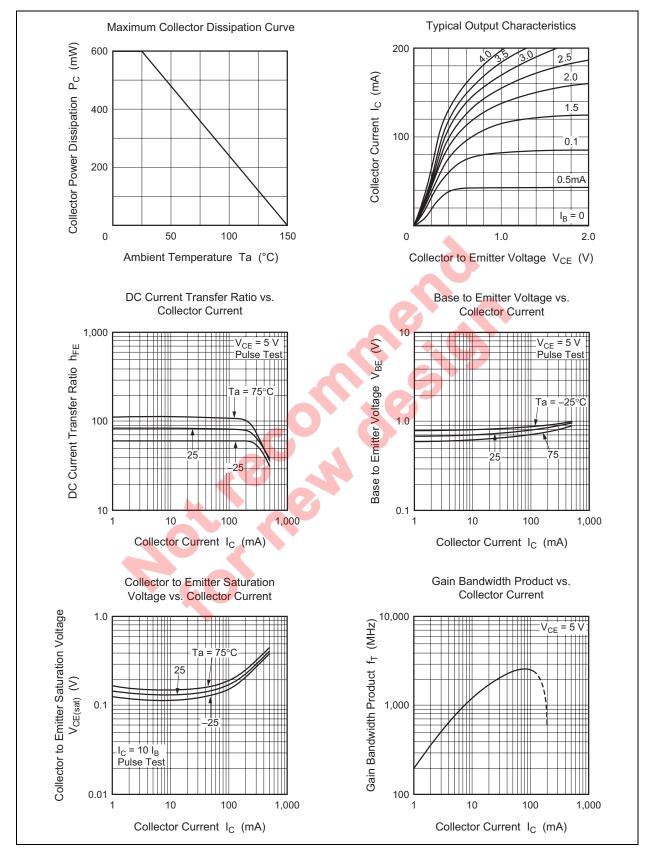
|  |                      |     |     |     |      | $(Ta = 25^{\circ}C)$                                |
|--|----------------------|-----|-----|-----|------|---|
| Item                                   | Symbol               | Min | Тур | Max | Unit | Test conditions                                     |
| Collector to base breakdown voltage    | V <sub>(BR)CBO</sub> | 30  | —   | —   | V    | $I_{C} = 100 \ \mu A, \ I_{E} = 0$                  |
| Collector to emitter breakdown voltage | V <sub>(BR)CEO</sub> | 20  | —   | —   | V    | $I_{C} = 1 \text{ mA}, R_{BE} = \infty$             |
| Collector cutoff current               | I <sub>CBO</sub>     | —   | —   | 1   | μΑ   | $V_{CB} = 25 \text{ V}, \text{ I}_{E} = 0$          |
| Emitter cutoff current                 | I <sub>EBO</sub>     | —   | —   | 10  | μΑ   | $V_{EB} = 3 V, I_E = 0$                             |
| DC current transfer ratio              | h <sub>FE</sub>      | 50  | —   | 200 |      | $V_{CE} = 5 \text{ V}, I_{C} = 50 \text{ mA}$       |
| Gain bandwidth product                 | f⊤                   | 1.5 | 2.5 | —   | GHz  | $V_{CE} = 5 \text{ V}, I_{C} = 50 \text{ mA}$       |
| Collector output capacitance           | Cob                  | _   | 4.0 | _   | pF   | $V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$ |



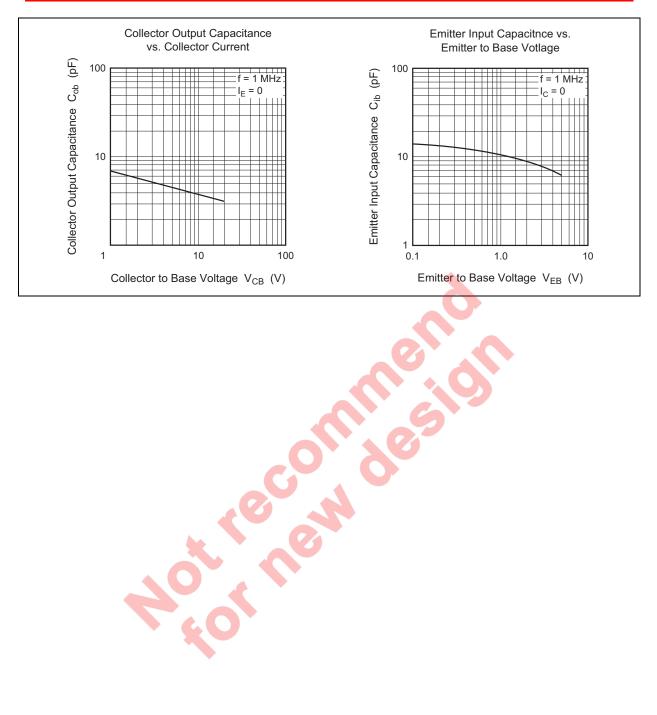
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## **Main Characteristics**

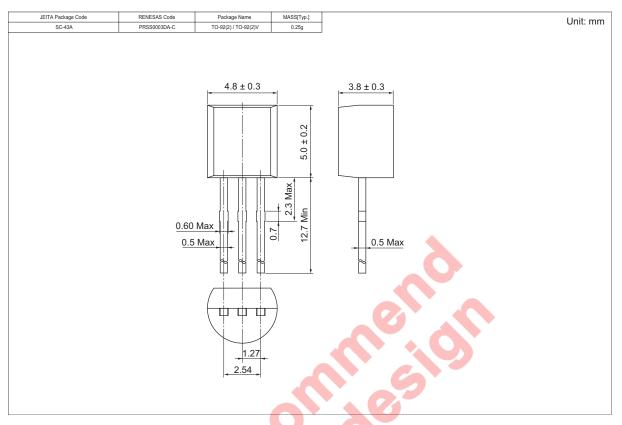








## **Package Dimensions**



## **Ordering Information**

| Part Name   | Quantity | Shipping Container      |
|-------------|----------|-------------------------|
| 2SC4308TZ-E | 2500     | Hold Box, Radial Taping |

Note: For some grades, production may be terminated. Please contact the Renesas sales office to check the state of production before ordering the product.



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