

## 2SD1367

Silicon NPN Epitaxial

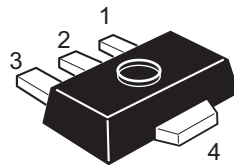
REJ03G0785-0200  
(Previous ADE-208-1147)  
Rev.2.00  
Aug.10.2005

### Application

- Low frequency power amplifier
- Complementary pair with 2SB1001

### Outline

RENESAS Package code: PLZZ0004CA-A  
(Package name: UPAK<sup>®</sup>)



1. Base
2. Collector
3. Emitter
4. Collector (Flange)

Note: Marking is "BC".

\*UPAK is a trademark of Renesas Technology Corp.

### Absolute Maximum Ratings

(Ta = 25°C)

| Item                         | Symbol             | Ratings     | Unit |
|------------------------------|--------------------|-------------|------|
| Collector to base voltage    | $V_{CBO}$          | 20          | V    |
| Collector to emitter voltage | $V_{CEO}$          | 16          | V    |
| Emitter to base voltage      | $V_{EBO}$          | 6           | V    |
| Collector current            | $I_C$              | 2           | A    |
| Collector peak current       | $i_{C(peak)}^{*1}$ | 3           | A    |
| Collector power dissipation  | $P_C^{*2}$         | 1           | W    |
| Junction temperature         | $T_j$              | 150         | °C   |
| Storage temperature          | $T_{stg}$          | -55 to +150 | °C   |

Notes: 1.  $PW \leq 10$  ms, Duty cycle  $\leq 20\%$ .

2. Value on the alumina ceramic board (12.5 × 20 × 0.7 mm)

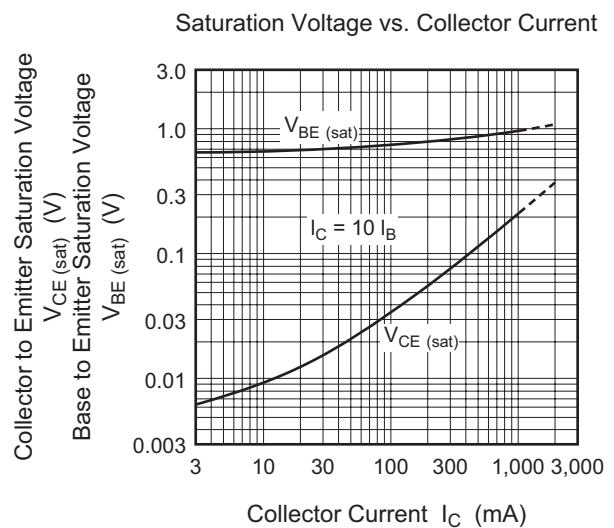
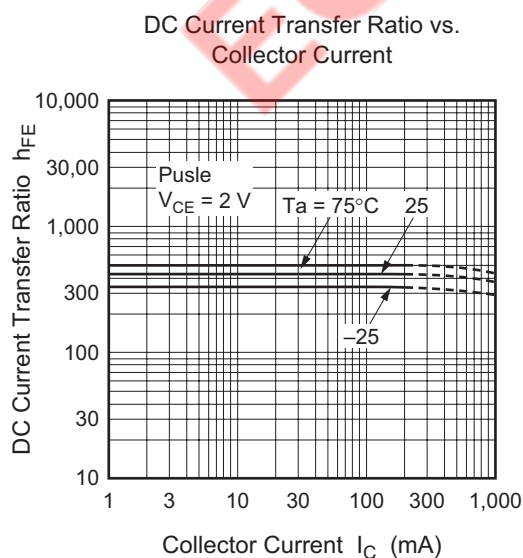
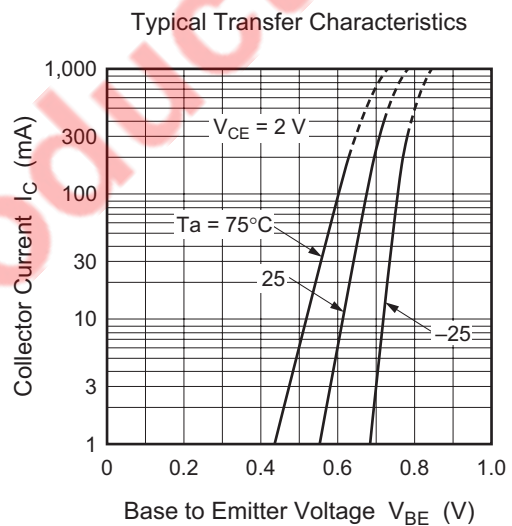
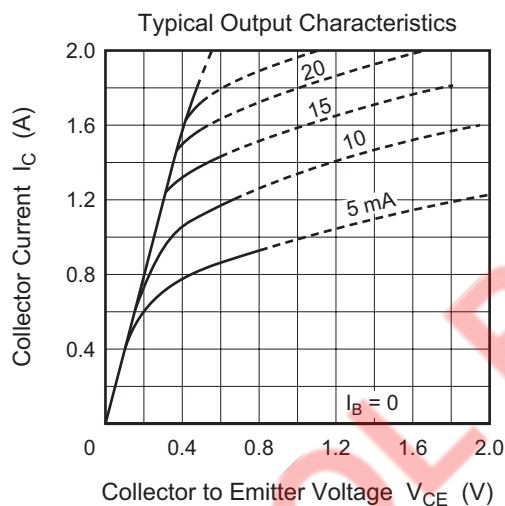
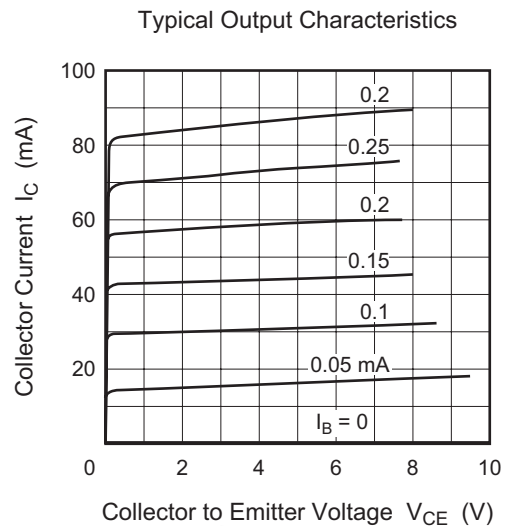
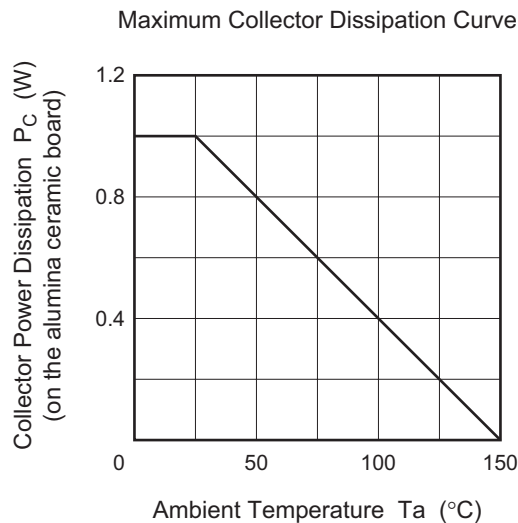
## Electrical Characteristics

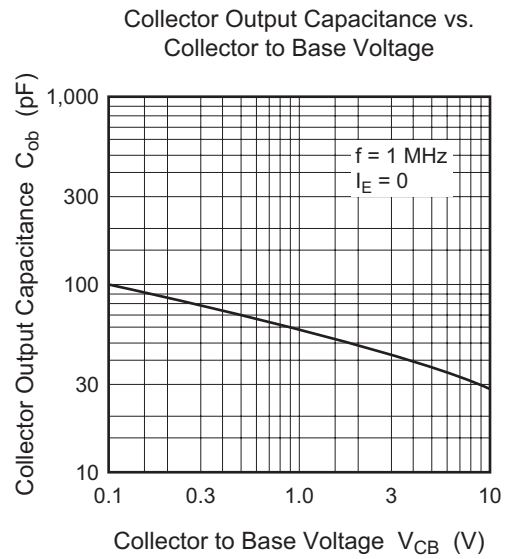
(Ta = 25°C)

| Item                                    | Symbol        | Min | Typ  | Max | Unit    | Test conditions                             |
|---|---------------|-----|------|-----|---------|---|
| Collector to base breakdown voltage     | $V_{(BR)CBO}$ | 20  | —    | —   | V       | $I_C = 10\ \mu A, I_E = 0$                  |
| Collector to emitter breakdown voltage  | $V_{(BR)CEO}$ | 16  | —    | —   | V       | $I_C = 1\ mA, R_{BE} = \infty$              |
| Emitter to base breakdown voltage       | $V_{(BR)EBO}$ | 6   | —    | —   | V       | $I_E = 10\ \mu A, I_C = 0$                  |
| Collector cutoff current                | $I_{CBO}$     | —   | —    | 0.1 | $\mu A$ | $V_{CB} = 16\ V, I_E = 0$                   |
| Emitter cutoff current                  | $I_{EBO}$     | —   | —    | 0.1 | $\mu A$ | $V_{EB} = 5\ V, I_C = 0$                    |
| DC current transfer ratio               | $h_{FE}$      | 250 | —    | 500 |         | $V_{CE} = 2\ V, I_C = 0.1\ A, \text{Pulse}$ |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | —   | 0.15 | 0.3 | V       | $I_C = 1\ A, I_B = 0.1\ A, \text{Pulse}$    |
| Base to emitter saturation voltage      | $V_{BE(sat)}$ | —   | 0.9  | 1.2 | V       | $I_C = 1\ A, I_B = 0.1\ A, \text{Pulse}$    |
| Gain bandwidth product                  | $f_T$         | —   | 100  | —   | MHz     | $V_{CE} = 2\ V, I_C = 10\ mA$               |
| Collector output capacitance            | $C_{ob}$      | —   | 20   | —   | pF      | $V_{CB} = 10\ V, I_E = 0, f = 1\ MHz$       |

EOL Product

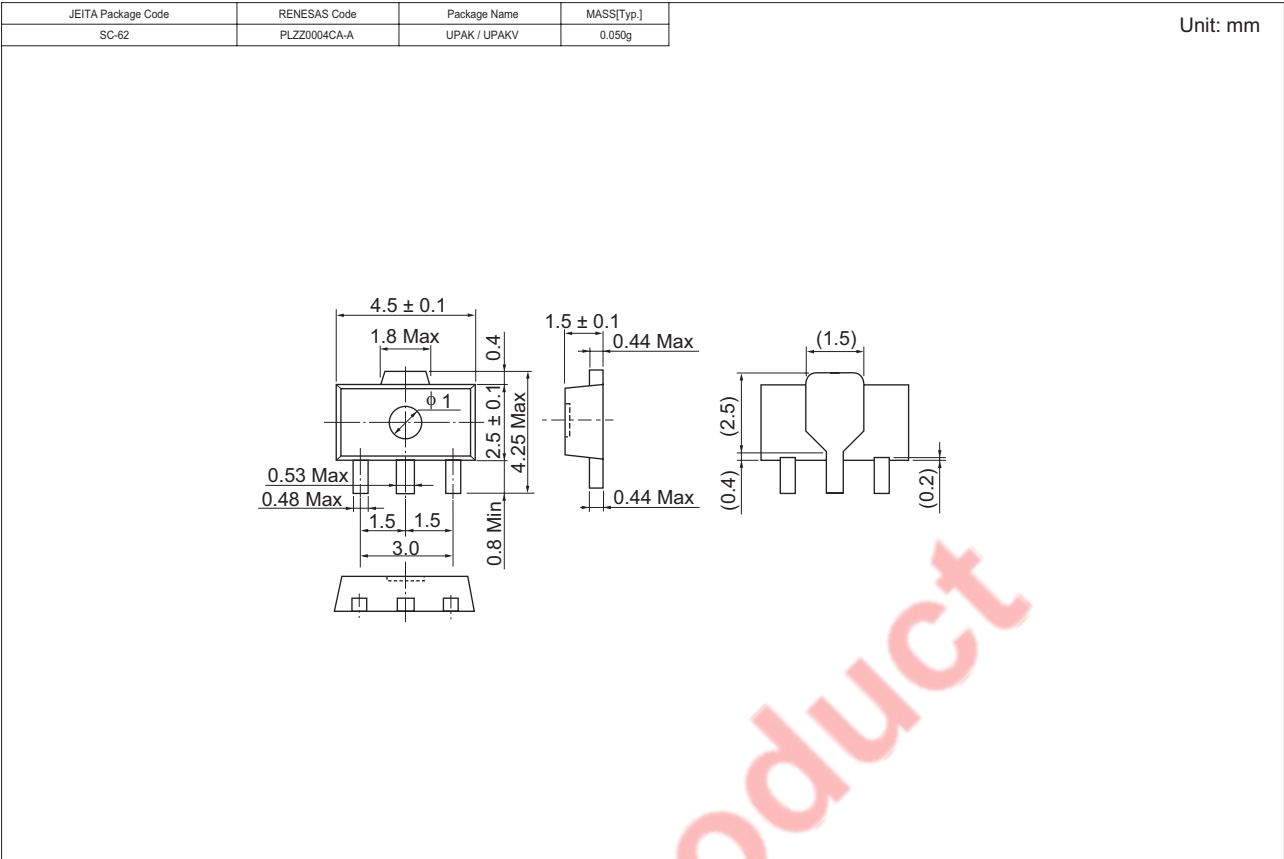
## Main Characteristics





EOL Product

Package Dimensions



Ordering Information

| Part Name     | Quantity | Shipping Container                 |
|---------------|----------|------------------------------------|
| 2SD1367BCTR-E | 1000     | φ 178 mm Reel, 12 mm Emboss 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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