

To our customers,

Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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2SD1419

Silicon NPN Epitaxial

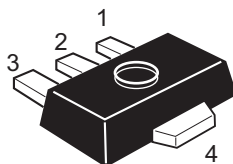
REJ03G0788-0200
 (Previous ADE-208-1150)
 Rev.2.00
 Aug.10.2005

Application

- Low frequency power amplifier
- Complementary pair with 2SB1026

Outline

RENESAS Package code: PLZZ0004CA-A
 (Package name: UPAK[®])



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

Note: Marking is "DE".

*UPAK is a trademark of Renesas Technology Corp.

Absolute Maximum Ratings

(Ta = 25°C)

| Item | Symbol | Ratings | Unit |
|------------------------------|--------------------|-------------|------|
| Collector to base voltage | V_{CBO} | 120 | V |
| Collector to emitter voltage | V_{CEO} | 100 | V |
| Emitter to base voltage | V_{EBO} | 5 | V |
| Collector current | I_C | 1 | A |
| Collector peak current | $i_{C(peak)}^{*1}$ | 2 | 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 x 20 x 0.7 mm)

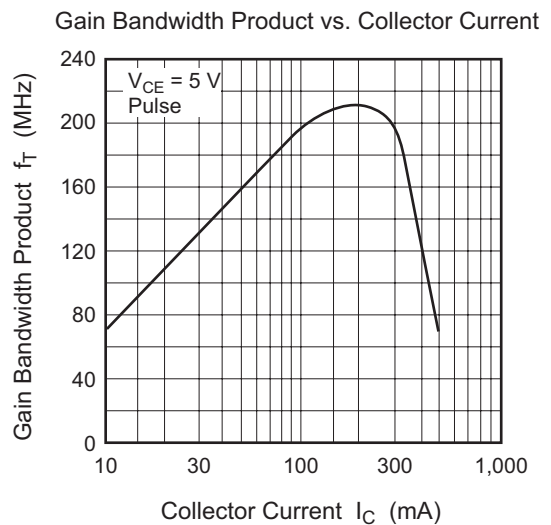
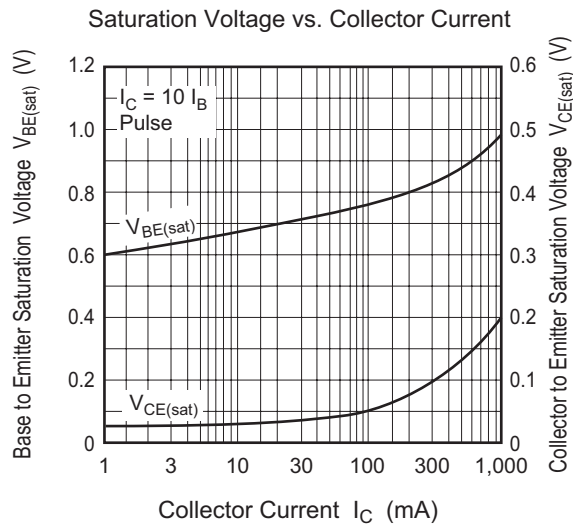
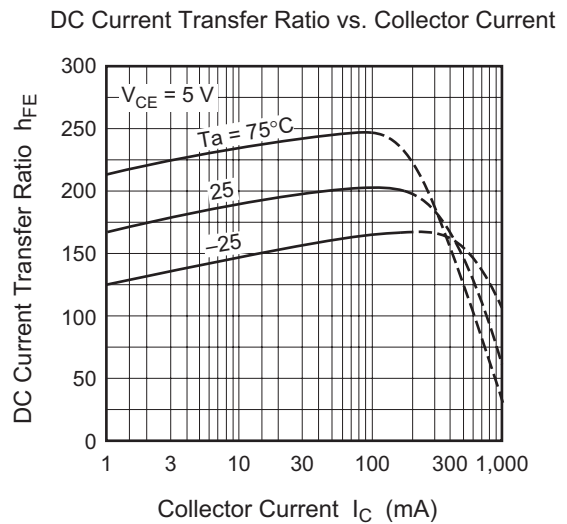
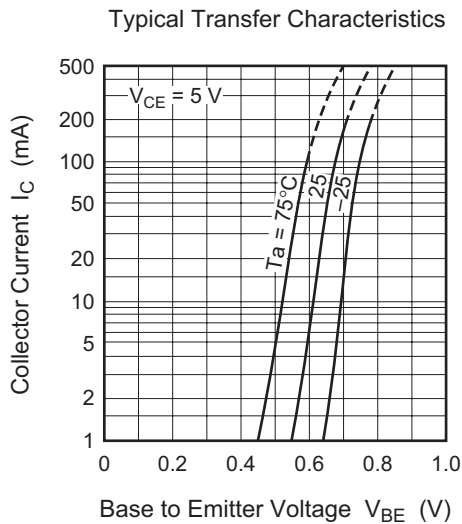
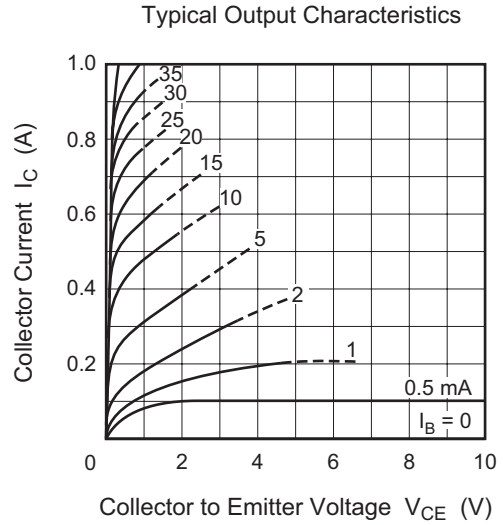
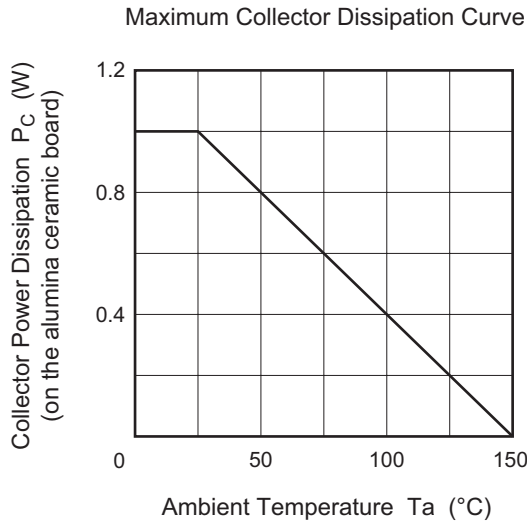
Electrical Characteristics

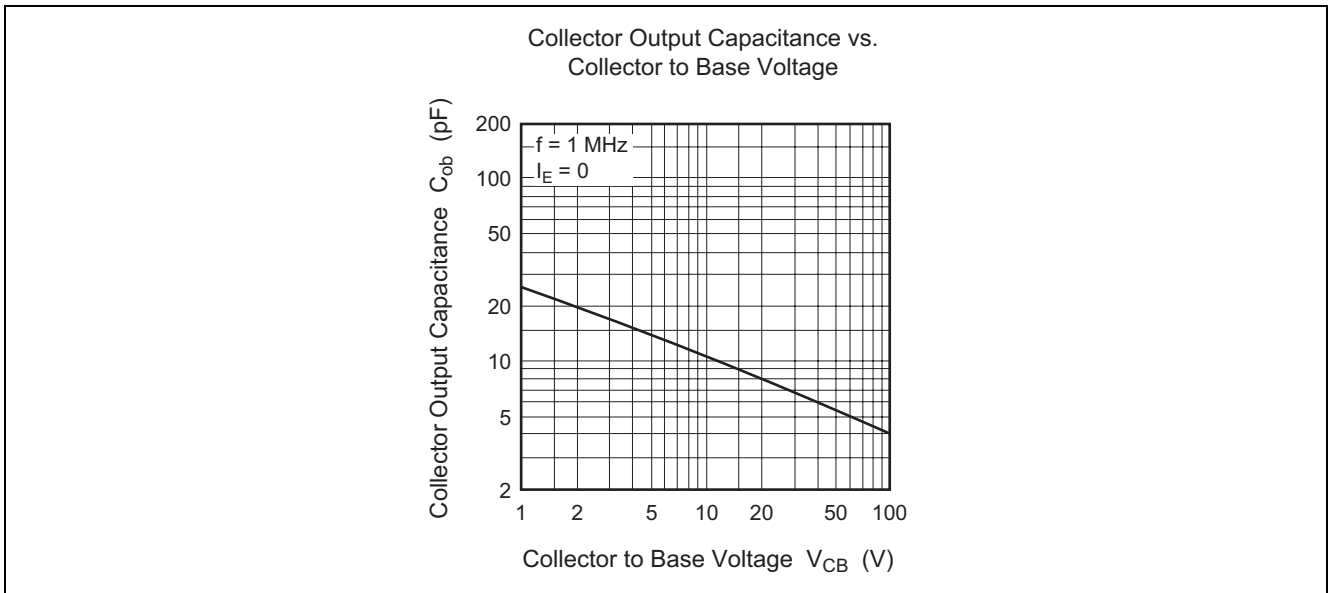
(Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|---|---------------|-----|-----|-----|---------|---|
| Collector to base breakdown voltage | $V_{(BR)CBO}$ | 120 | — | — | V | $I_C = 10 \mu A, I_E = 0$ |
| Collector to emitter breakdown voltage | $V_{(BR)CEO}$ | 100 | — | — | V | $I_C = 1 \text{ mA}, R_{BE} = \infty$ |
| Emitter to base breakdown voltage | $V_{(BR)EBO}$ | 5 | — | — | V | $I_E = 10 \mu A, I_C = 0$ |
| Collector cutoff current | I_{CBO} | — | — | 10 | μA | $V_{CB} = 100 \text{ V}, I_E = 0$ |
| DC current transfer ratio | h_{FE1} | 100 | — | 200 | | $V_{CE} = 5 \text{ V}, I_C = 150 \text{ mA}^{*1}$ |
| | h_{FE2} | 30 | — | — | | $V_{CE} = 5 \text{ V}, I_C = 500 \text{ mA}^{*1}$ |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | — | — | 1 | V | $I_C = 500 \text{ mA}, I_B = 50 \text{ mA}^{*1}$ |
| Base to emitter voltage | V_{BE} | — | — | 1.5 | V | $V_{CE} = 5 \text{ V}, I_C = 150 \text{ mA}^{*1}$ |
| Gain bandwidth product | f_T | — | 140 | — | MHz | $V_{CE} = 5 \text{ V}, I_C = 150 \text{ mA}^{*1}$ |
| Collector output capacitance | C_{ob} | — | 12 | — | pF | $V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$ |

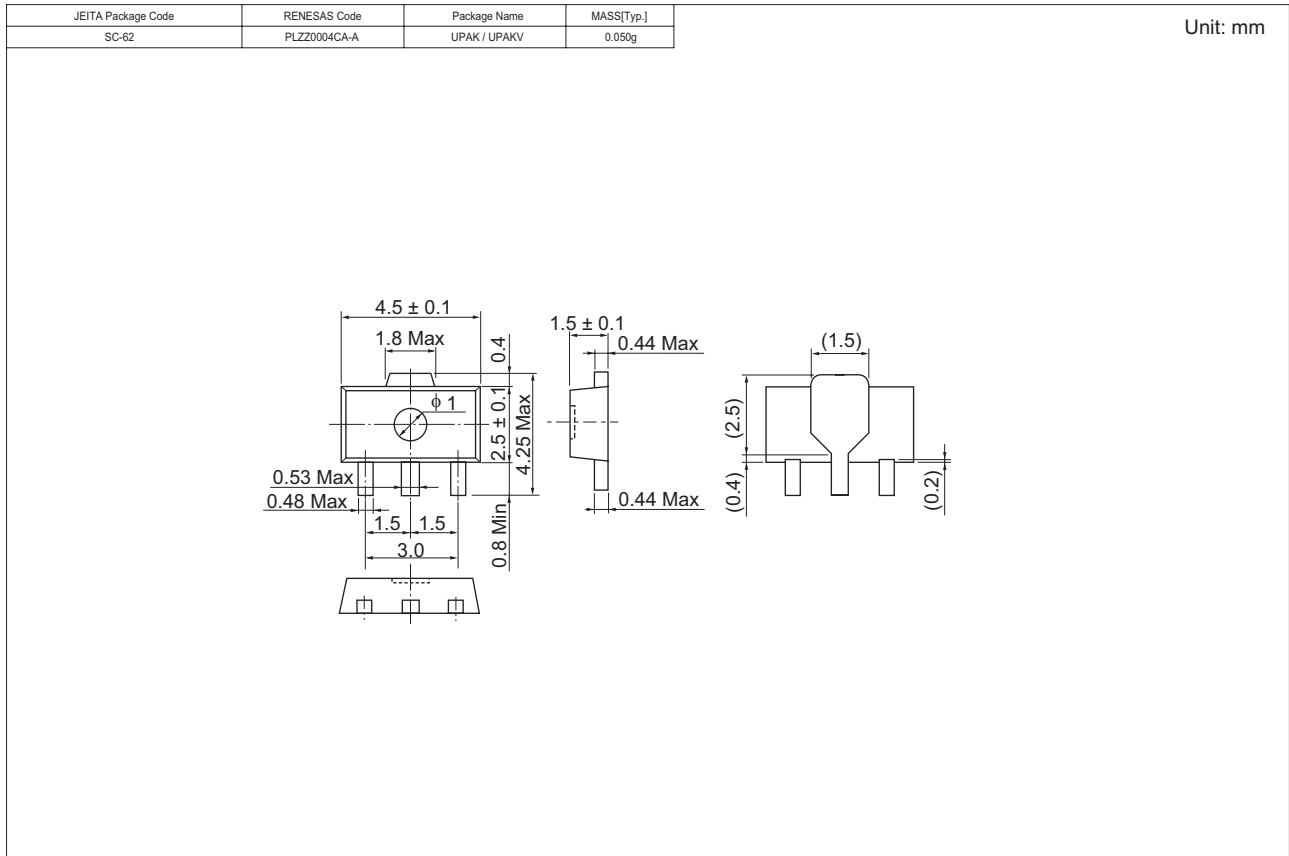
Notes: 1. Pulse test

Main Characteristics





Package Dimensions



Ordering Information

| Part Name | Quantity | Shipping Container |
|---------------|----------|---|
| 2SD1419DETL-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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