

# 2SC2618

## Silicon NPN Epitaxial

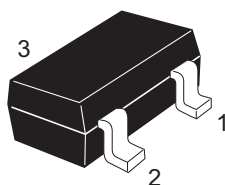
REJ03G0702-0200  
(Previous ADE-208-1069)  
Rev.2.00  
Aug.10.2005

### Application

- Low frequency amplifier
- Complementary pair with 2SA1121

### Outline

RENESAS Package code: PLSP0003ZB-A  
(Package name: MPAK)



1. Emitter  
2. Base  
3. Collector

### Absolute Maximum Ratings

(Ta = 25°C)

| Item                         | Symbol    | Ratings     | Unit |
|------------------------------|-----------|-------------|------|
| Collector to base voltage    | $V_{CBO}$ | 35          | V    |
| Collector to emitter voltage | $V_{CEO}$ | 35          | V    |
| Emitter to base voltage      | $V_{EBO}$ | 4           | V    |
| Collector current            | $I_C$     | 500         | mA   |
| Collector power dissipation  | $P_C$     | 150         | mW   |
| Junction temperature         | $T_j$     | 150         | °C   |
| Storage temperature          | $T_{stg}$ | -55 to +150 | °C   |

## Electrical Characteristics

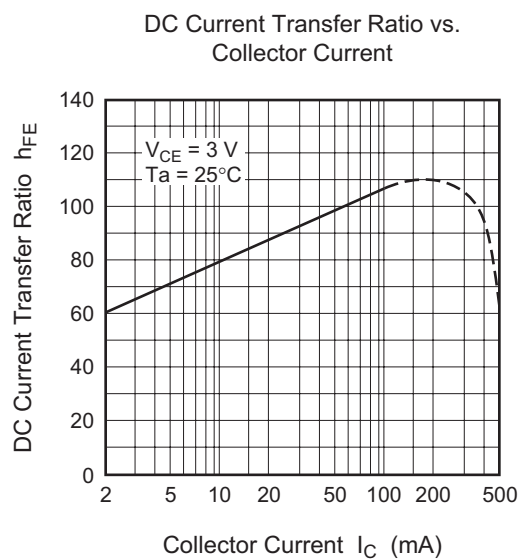
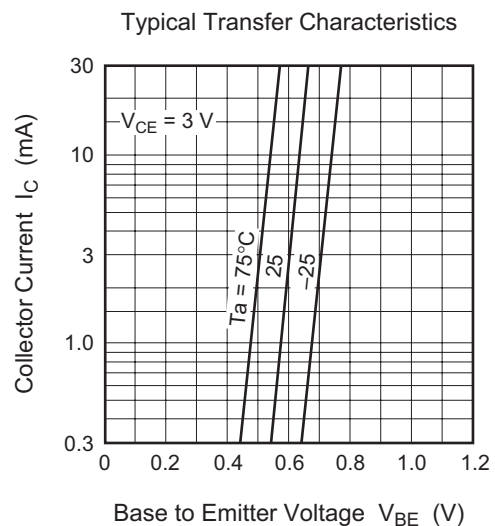
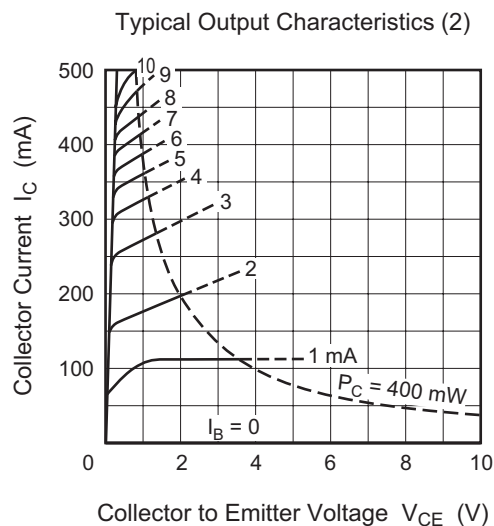
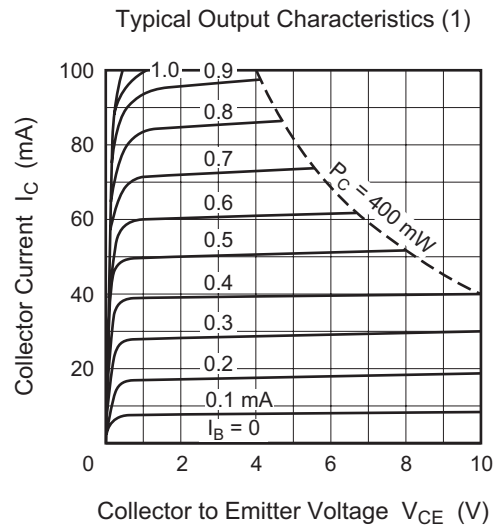
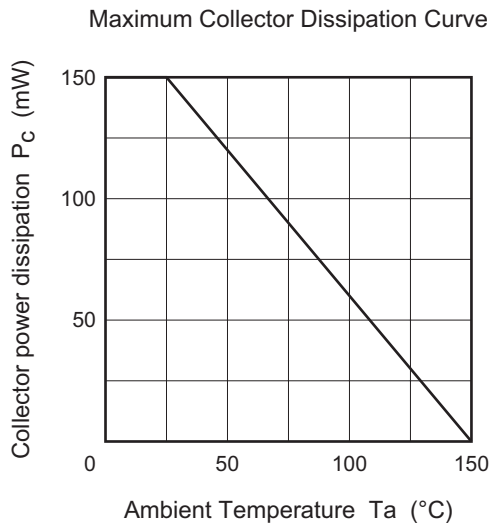
(Ta = 25°C)

| Item                                    | Symbol         | Min | Typ  | Max | Unit    | Test conditions                                |
|-----------------------------------------|----------------|-----|------|-----|---------|------------------------------------------------|
| Collector to base breakdown voltage     | $V_{(BR)CBO}$  | 35  | —    | —   | V       | $I_C = 10\ \mu A, I_E = 0$                     |
| Collector to emitter breakdown voltage  | $V_{(BR)CEO}$  | 35  | —    | —   | V       | $I_C = 1\ mA, R_{BE} = \infty$                 |
| Emitter to base breakdown voltage       | $V_{(BR)EBO}$  | 4   | —    | —   | V       | $I_E = 10\ \mu A, I_C = 0$                     |
| Collector cutoff current                | $I_{CBO}$      | —   | —    | 0.5 | $\mu A$ | $V_{CB} = 20\ V, I_C = 0$                      |
| DC current transfer ratio               | $h_{FE1}^{*1}$ | 100 | —    | 320 |         | $V_{CE} = 3\ V, I_C = 10\ mA$<br>(Pulse test)  |
|                                         | $h_{FE2}$      | 10  | —    | —   |         | $V_{CE} = 3\ V, I_C = 500\ mA$<br>(Pulse test) |
| Collector to emitter saturation voltage | $V_{CE(sat)}$  | —   | 0.2  | 0.6 | V       | $I_C = 150\ mA, I_B = 15\ mA$<br>(Pulse test)  |
| Base to emitter voltage                 | $V_{BE}$       | —   | 0.64 | —   | V       | $V_{CE} = 3\ V, I_C = 10\ mA$<br>(Pulse test)  |

Note: 1. The 2SC2618 is grouped by  $h_{FE1}$  as follows.

| Grade     | C          | D          |
|-----------|------------|------------|
| Mark      | RC         | RD         |
| $h_{FE1}$ | 100 to 200 | 160 to 320 |

## Main Characteristics



## Package Dimensions

| JEITA Package Code | RENESAS Code | Package Name                         | MASS[Typ.] |
|--------------------|--------------|--------------------------------------|------------|
| SC-59A             | PLSP0003ZB-A | MPAK(T) / MPAK(T)/V,<br>MPAK / MPAKV | 0.011g     |

**A-A Section**

**Pattern of terminal position areas**

| Reference Symbol | Dimension in Millimeters |      |      |
|------------------|--------------------------|------|------|
|                  | Min                      | Nom  | Max  |
| A                | 1.0                      | —    | 1.3  |
| A <sub>1</sub>   | 0                        | —    | 0.1  |
| A <sub>2</sub>   | 1.0                      | 1.1  | 1.2  |
| A <sub>3</sub>   | —                        | 0.25 | —    |
| b                | 0.35                     | 0.42 | 0.5  |
| b <sub>1</sub>   | —                        | 0.4  | —    |
| c                | 0.1                      | 0.13 | 0.15 |
| c <sub>1</sub>   | —                        | 0.11 | —    |
| D                | 2.7                      | —    | 3.1  |
| E                | 1.35                     | 1.5  | 1.65 |
| e                | —                        | 0.95 | —    |
| HE               | 2.2                      | 2.8  | 3.0  |
| L                | 0.35                     | —    | 0.75 |
| L <sub>1</sub>   | 0.15                     | —    | 0.55 |
| L <sub>P</sub>   | 0.25                     | —    | 0.65 |
| x                | —                        | —    | 0.05 |
| b <sub>2</sub>   | —                        | —    | 0.55 |
| e <sub>1</sub>   | —                        | 1.95 | —    |
| l <sub>1</sub>   | —                        | —    | 1.05 |
| Q                | —                        | 0.3  | —    |

## Ordering Information

| Part Name                      | Quantity | Shipping Container                |
|--------------------------------|----------|-----------------------------------|
| 2SC2618RCTL-E<br>2SC2618RDTL-E | 3000     | φ 178 mm Reel, 8 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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