

# 2SA1121

## Silicon PNP Epitaxial

R07DS0271EJ0400

Rev.4.00

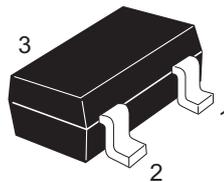
Jan 10, 2014

### Application

- Low frequency amplifier
- Complementary pair with 2SC2618

### 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

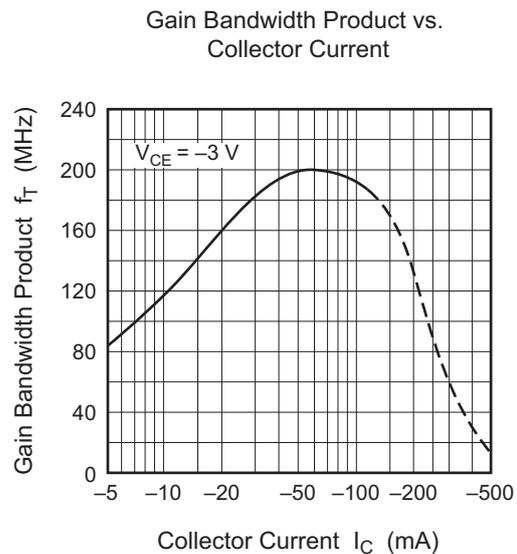
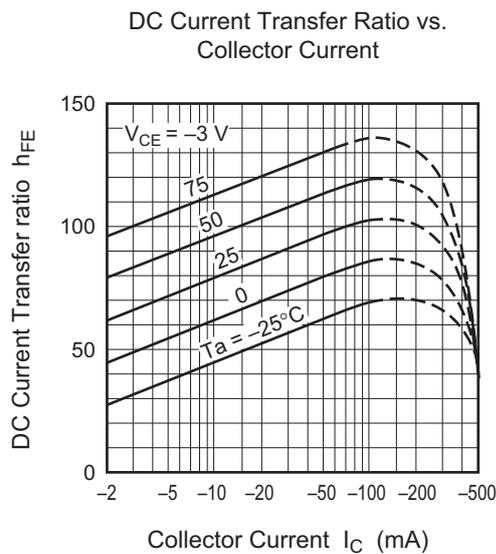
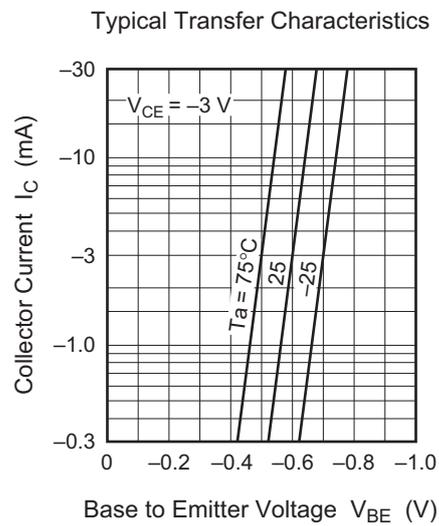
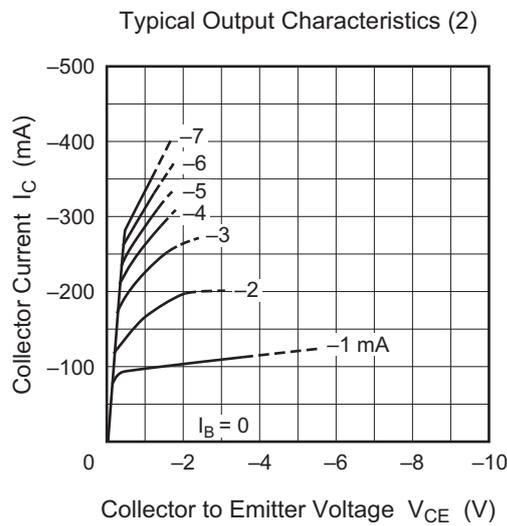
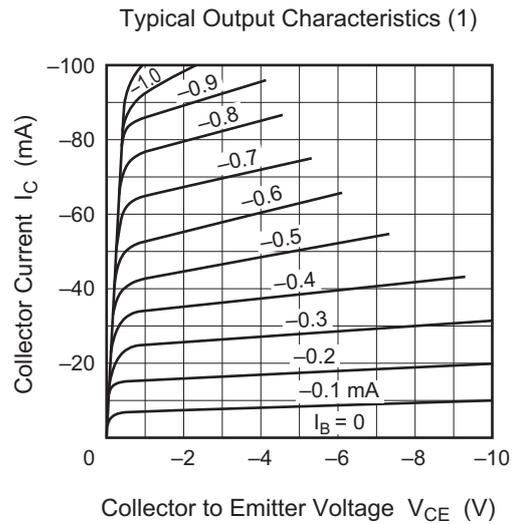
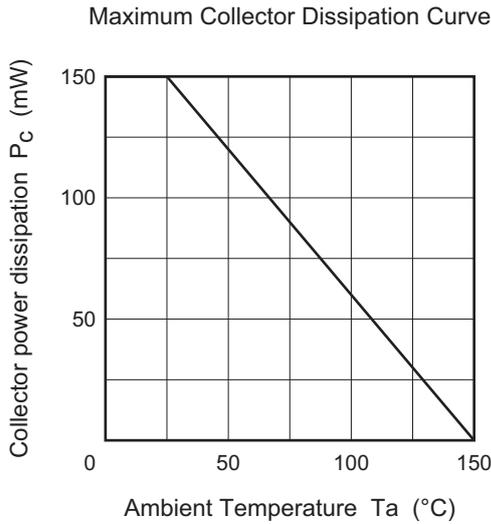
(Ta = 25°C)

| 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       | $I_C = -1 \text{ mA}, R_{BE} = \infty$                         |
| 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 | $\mu A$ | $V_{CB} = -20 \text{ V}, I_E = 0$                              |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | —   | -0.2  | -0.6 | V       | $I_C = -150 \text{ mA}, I_B = -15 \text{ mA}$                  |
| DC current transfer ratio               | $h_{FE}^{*1}$ | 100 | —     | 320  |         | $V_{CE} = -3 \text{ V}, I_C = -10 \text{ mA}$                  |
|   | $h_{FE}$      | 10  | —     | —    |         | $V_{CE} = -3 \text{ V}, I_C = -500 \text{ mA}$<br>(Pulse test) |
| Base to emitter voltage                 | $V_{BE}$      | —   | -0.64 | —    | V       | $V_{CE} = -3 \text{ V}, I_C = -10 \text{ mA}$                  |

Note: 1. The 2SA1121 is grouped by  $h_{FE}$  as follows.

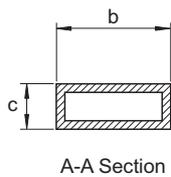
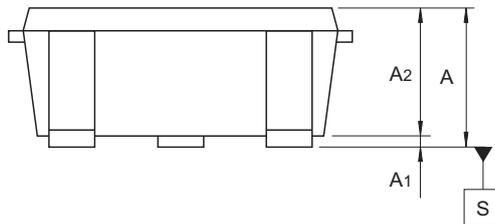
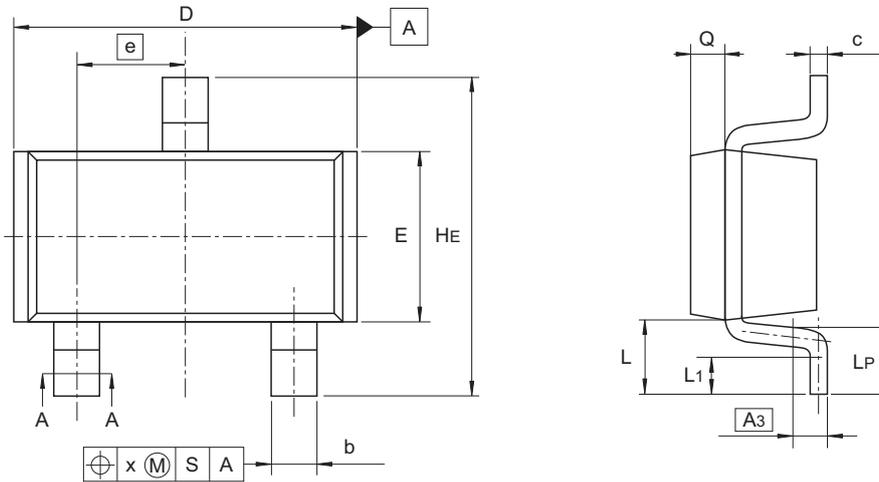
| Grade    | C          | D          |
|----------|------------|------------|
| Mark     | SC         | SD         |
| $h_{FE}$ | 100 to 200 | 160 to 320 |

Main Characteristics



### Package Dimensions

| JEITA Package Code | RENESAS Code | Previous Code      | MASS (Typ) [g] |
|--------------------|--------------|--------------------|----------------|
| SC-59A             | PLSP0003ZB-A | MPAK(T) / MPAK(T)V | 0.011          |



| Reference Symbol | Dimensions in millimeters |      |      |
|------------------|---------------------------|------|------|
|                  | Min                       | Nom  | Max  |
| A                | 1.0                       | —    | 1.3  |
| A1               | 0                         | —    | 0.1  |
| A2               | 1.0                       | 1.1  | 1.2  |
| A3               | —                         | 0.25 | —    |
| b                | 0.35                      | 0.4  | 0.5  |
| c                | 0.1                       | 0.16 | 0.26 |
| 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 |
| L1               | 0.15                      | —    | 0.55 |
| LP               | 0.25                      | —    | 0.65 |
| x                | —                         | —    | 0.05 |
| Q                | —                         | 0.3  | —    |

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**Ordering Information**

| Orderable Part Number  | Quantity | Shipping Container                |
|--|----------|-----------------------------------|
| 2SA1121SCTL-E<br>2SA1121SDTL-E<br>2SA1121SCTL-H<br>2SA1121SDTL-H | 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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