

# 2SD2121(L)/(S)

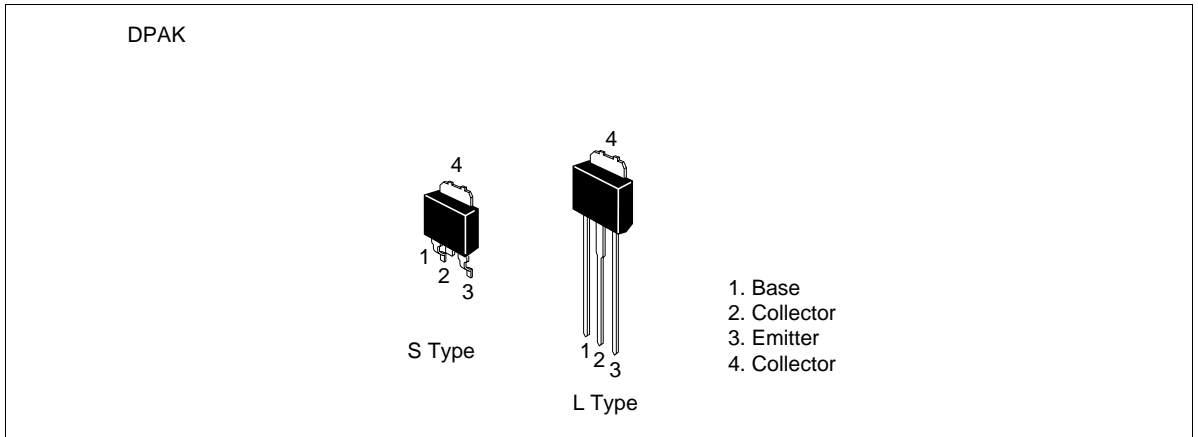
Silicon NPN Epitaxial

# HITACHI

## Application

Low frequency power amplifier complementary pair with 2SB1407(L)/(S)

## Outline



## 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      | $V_{EBO}$     | 5           | V    |
| Collector current            | $I_C$         | 2.5         | A    |
| Collector peak current       | $I_{C(peak)}$ | 3           | A    |
| Collector power dissipation  | $P_C^{*1}$    | 18          | W    |
| Junction temperature         | $T_j$         | 150         | °C   |
| Storage temperature          | $T_{stg}$     | -55 to +150 | °C   |

Note: 1. Value at  $T_C = 25^\circ\text{C}$ .

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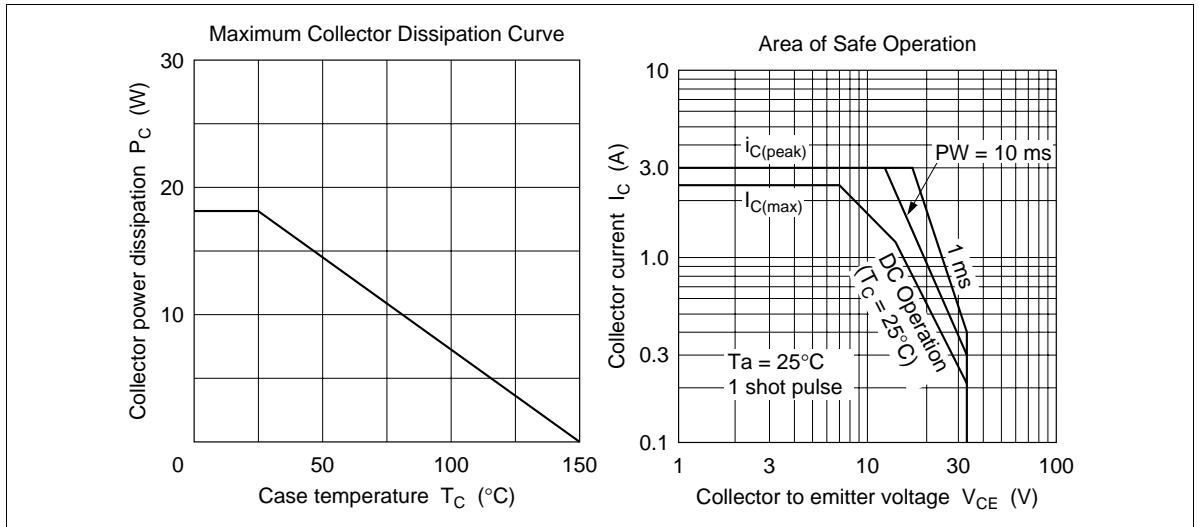
## Electrical Characteristics (Ta = 25°C)

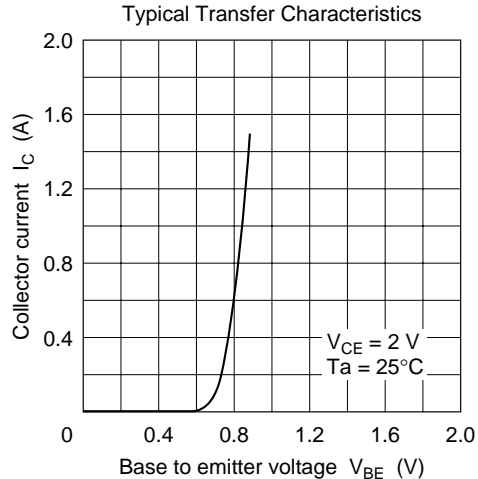
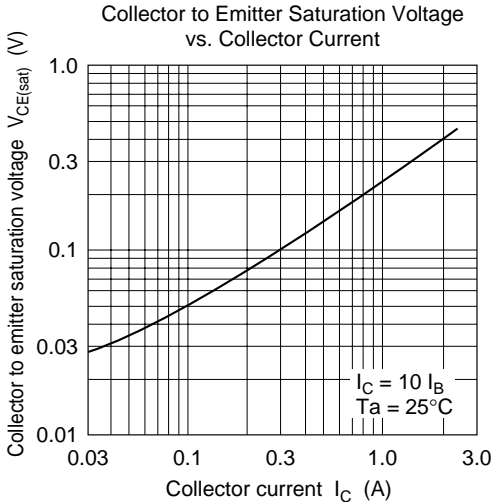
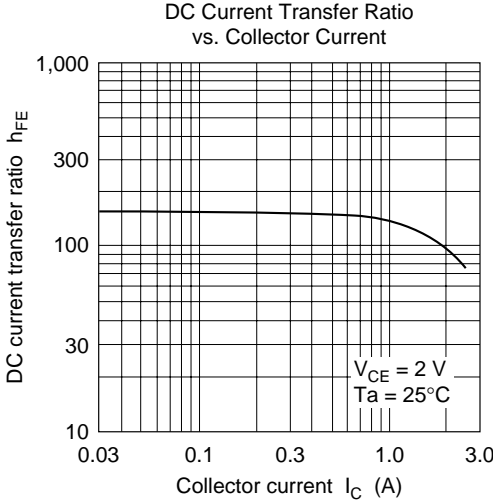
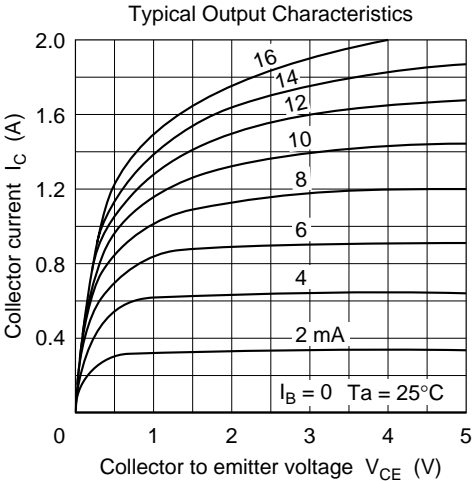
| Item                                    | Symbol         | Min | Typ | Max | Unit          | Test conditions                                  |
|---|----------------|-----|-----|-----|---------------|--|
| Collector to base breakdown voltage     | $V_{(BR)CBO}$  | 35  | —   | —   | V             | $I_C = 1 \text{ mA}, I_E = 0$                    |
| Collector to emitter breakdown voltage  | $V_{(BR)CEO}$  | 35  | —   | —   | V             | $I_C = 10 \text{ mA}, R_{BE} = \infty$           |
| Emitter to base breakdown voltage       | $V_{(BR)EBO}$  | 5   | —   | —   | V             | $I_E = 1 \text{ mA}, I_C = 0$                    |
| Collector cutoff current                | $I_{CBO}$      | —   | —   | 20  | $\mu\text{A}$ | $V_{CB} = 35 \text{ V}, I_E = 0$                 |
| DC current transfer ratio               | $h_{FE1}^{*1}$ | 60  | —   | 320 |               | $V_{CE} = 2 \text{ V}, I_C = 0.5 \text{ A}^{*2}$ |
|   | $h_{FE2}$      | 20  | —   | —   |               | $V_{CE} = 2 \text{ V}, I_C = 1.5 \text{ A}^{*2}$ |
| Base to emitter voltage                 | $V_{BE}$       | —   | —   | 1.5 | V             | $V_{CE} = 2 \text{ V}, I_C = 1.5 \text{ A}^{*2}$ |
| Collector to emitter saturation voltage | $V_{CE(sat)}$  | —   | —   | 1.0 | V             | $I_C = 2 \text{ A}, I_B = 0.2 \text{ A}^{*2}$    |

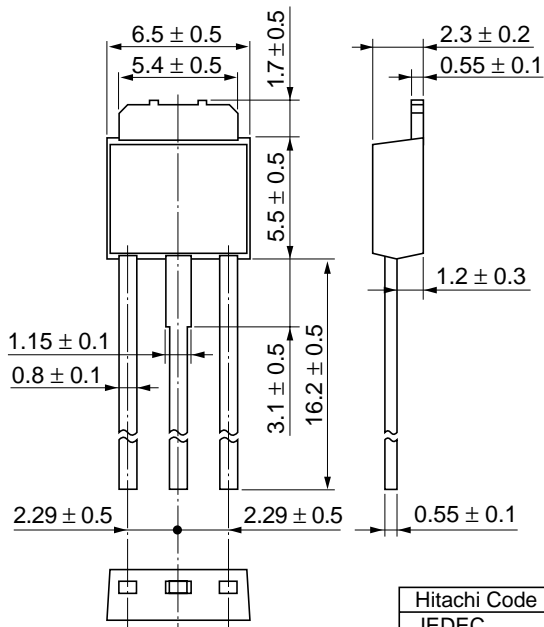
Notes: 1. The 2SD2121(L)/(S) is grouped by  $h_{FE1}$  as follows.

| B         | C          | D          |
|-----------|------------|------------|
| 60 to 120 | 100 to 200 | 160 to 320 |

### 2. Pulse test.







|                          |              |
|--------------------------|--------------|
| Hitachi Code             | DPAK (L)-(1) |
| JEDEC                    | —            |
| EIAJ                     | Conforms     |
| Weight (reference value) | 0.42 g       |

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