
2SB1026

Silicon PNP Epitaxial

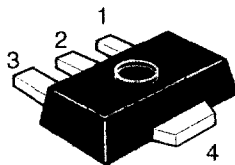
HITACHI

Application

- Low frequency power amplifier
- Complementary pair with 2SD1419

Outline

UPAK



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

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 × 20 × 0.7 mm)

Electrical Characteristics (Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|---|----------------|------|-----|------|---------|--|
| Collector to base breakdown voltage | $V_{(BR)CBO}$ | -120 | — | — | V | $I_C = -10 \mu A, I_E = 0$ |
| Collector to emitter breakdown voltage | $V_{(BR)CEO}$ | -100 | — | — | V | $I_C = -1$ 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 | $V_{CB} = -100$ V, $I_E = 0$ |
| DC current transfer ratio | h_{FE1}^{*1} | 60 | — | 200 | | $V_{CE} = -5$ V, $I_C = -150$ mA |
| | h_{FE2} | 30 | — | — | | $V_{CE} = -5$ V, $I_C = -500$ mA (Pulse test) |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | — | — | -1 | V | $I_C = -500$ mA, $I_B = -50$ mA (Pulse test) |
| Base to emitter voltage | V_{BE} | — | — | -0.9 | V | $V_{CE} = -5$ V, $I_C = -150$ mA |
| Gain bandwidth product | f_T | — | 140 | — | MHz | $V_{CE} = -5$ V, $I_C = -150$ mA |
| Collector output capacitance | C_{ob} | — | 20 | — | pF | $V_{CB} = -10$ V, $I_E = 0$, $f = 1$ MHz |

Note: 1. The 2SB1026 is grouped by h_{FE1} as follows.

| Mark | DL | DM |
|-----------|-----------|------------|
| h_{FE1} | 60 to 120 | 100 to 200 |

See characteristic curves of 2SB1025.

