
2SA1171

Silicon PNP Epitaxial

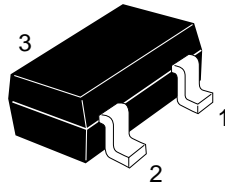
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Application

Low frequency small signal amplifier

Outline

MPAK



- 1. Emitter
- 2. Base
- 3. Collector

2SA1171

Absolute Maximum Ratings (Ta = 25°C)

| Item | Symbol | Ratings | Unit |
|------------------------------|-----------|-------------|------|
| Collector to base voltage | V_{CBO} | -90 | V |
| Collector to emitter voltage | V_{CEO} | -90 | V |
| Emitter to base voltage | V_{EBO} | -5 | V |
| Collector current | I_C | -50 | mA |
| Collector power dissipation | P_C | 150 | mW |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 to +150 | °C |

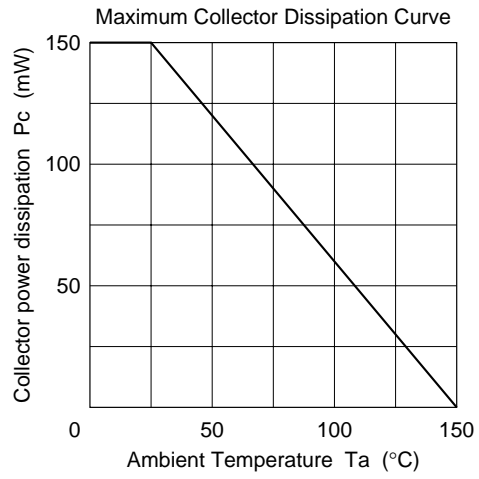
Electrical Characteristics (Ta = 25°C)

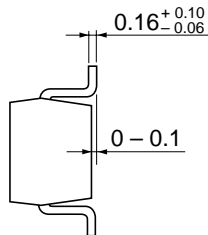
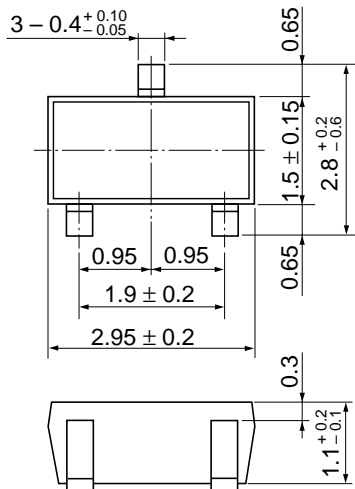
| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|---|---------------|-----|-----|-------|---------------|--|
| Collector to emitter breakdown voltage | $V_{(BR)CEO}$ | -90 | — | — | V | $I_C = -1 \text{ mA}$, $R_{BE} = \infty$ |
| Collector cutoff current | I_{CBO} | — | — | -0.5 | μA | $V_{CB} = -75 \text{ V}$, $I_E = 0$ |
| DC current transfer ratio | h_{FE}^{*1} | 250 | — | 800 | | $V_{CE} = -12 \text{ V}$, $I_C = -2 \text{ mA}$ |
| Base to emitter voltage | V_{BE} | — | — | -0.75 | V | $V_{CE} = -12 \text{ V}$, $I_C = -2 \text{ mA}$ |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | — | — | -0.5 | V | $I_C = -10 \text{ mA}$, $I_B = -1 \text{ mA}$ |
| Gain bandwidth product | f_T | — | 200 | — | MHz | $V_{CE} = -12 \text{ V}$, $I_C = -2 \text{ mA}$ |
| Collector output capacitance | C_{ob} | — | 1.6 | — | pF | $V_{CB} = -25 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$ |

Note: 1. The 2SA1171 is grouped by h_{FE} as follows.

| Grade | D | E |
|----------|------------|------------|
| Mark | PD | PE |
| h_{FE} | 250 to 500 | 400 to 800 |

See characteristic curves of 2SA872.





| | |
|--------------------------|----------|
| Hitachi Code | MPAK |
| JEDEC | — |
| EIAJ | Conforms |
| Weight (reference value) | 0.011 g |

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