

2SD1450

Silicon NPN epitaxial planer type

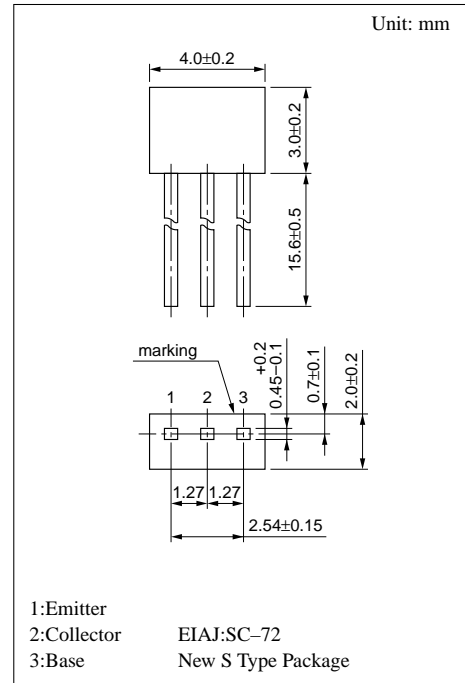
For low-frequency amplification

■ Features

- Optimum for high-density mounting.
- Allowing supply with the radial taping.
- Low collector to emitter saturation voltage $V_{CE(sat)}$.

■ Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Ratings | Unit |
|---------------------------------------|-----------|------------|------|
| Collector to base voltage | V_{CBO} | 25 | V |
| Collector to emitter voltage | V_{CEO} | 20 | V |
| Emitter to base voltage | V_{EBO} | 12 | V |
| Peak collector current | I_{CP} | 1 | A |
| Collector current | I_C | 0.5 | A |
| Collector power dissipation (Ta=25°C) | P_C | 300 | mW |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 ~ +150 | °C |



■ Electrical Characteristics (Ta=25°C)

| Parameter | Symbol | Conditions | min | typ | max | Unit |
|---|----------------|---|-----|------|-----|----------|
| Collector cutoff current | I_{CBO} | $V_{CB} = 25V, I_E = 0$ | | | 100 | nA |
| Collector to base voltage | V_{CBO} | $I_C = 10\mu A, I_E = 0$ | 25 | | | V |
| Collector to emitter voltage | V_{CEO} | $I_C = 1mA, I_B = 0$ | 20 | | | V |
| Emitter to base voltage | V_{EBO} | $I_E = 10\mu A, I_C = 0$ | 12 | | | V |
| Forward current transfer ratio | h_{FE1}^{*1} | $V_{CE} = 2V, I_C = 0.5A^{*2}$ | 200 | | 800 | |
| | h_{FE2} | $V_{CE} = 2V, I_C = 1A^{*2}$ | 60 | | | |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 500mA, I_B = 20mA^{*2}$ | | 0.13 | 0.4 | V |
| Base to emitter saturation voltage | $V_{BE(sat)}$ | $I_C = 500mA, I_B = 20mA^{*2}$ | | | 1.2 | V |
| Transition frequency | f_T | $V_{CB} = 10V, I_E = -50mA, f = 200MHz$ | | 200 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = 10V, I_E = 0, f = 1MHz$ | | 10 | | pF |
| ON resistance | R_{on}^{*3} | | | 0.6 | | Ω |

*2 Pulse measurement

*1 h_{FE1} Rank classification

| Rank | R | S | T |
|-----------|-----------|-----------|-----------|
| h_{FE1} | 200 ~ 350 | 300 ~ 500 | 400 ~ 800 |

*3 R_{on} Measurement circuit

