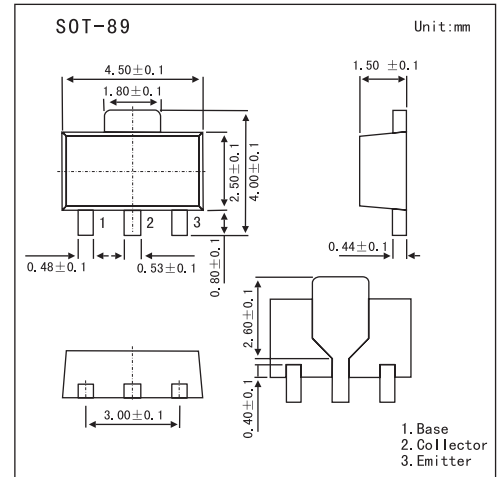


Silicon PNP Epitaxial Planar Type

2SB1589

■ Features

- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- Large collector power dissipation P_C .
- Mini Power type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Rating | Unit |
|-----------------------------|-----------|-------------|------------------|
| Collector-base voltage | V_{CB0} | -10 | V |
| Collector-emitter voltage | V_{CE0} | -10 | V |
| Emitter-base voltage | V_{EB0} | -7 | V |
| Peak collector current | I_{CP} | -2 | A |
| Collector current | I_C | -1.5 | A |
| Collector power dissipation | P_C | 1 | W |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Testconditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|---|-----|-------|-------|---------------|
| Collector cutoff current | I_{CBO} | $V_{CB} = -7\text{ V}, I_E = 0$ | | | -1 | μA |
| Collector-base voltage | V_{CB0} | $I_C = -10\ \mu\text{A}, I_E = 0$ | -10 | | | V |
| Collector-emitter voltage | V_{CE0} | $I_C = -1\ \text{mA}, I_B = 0$ | -10 | | | V |
| Emitter-base voltage | V_{EB0} | $I_E = -10\ \mu\text{A}, I_C = 0$ | -7 | | | V |
| Forward current transfer ratio | h_{FE} | $V_{CE} = -1\ \text{V}, I_C = -400\ \text{mA}$ | 200 | | 700 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -1\ \text{A}, I_B = -25\ \text{mA}$ | | -0.24 | -0.35 | V |
| Transition frequency | f_T | $V_{CB} = -6\ \text{V}, I_E = 50\ \text{mA}, f = 200\ \text{MHz}$ | | 190 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = -10\ \text{V}, I_E = 0, f = 1\ \text{MHz}$ | | 6.5 | | pF |
| Forward voltage | V_F | $I_F = -500\ \text{mA}$ | | | 1.3 | V |

■ Marking

| Marking | 1U |
|---------|----|
| | |