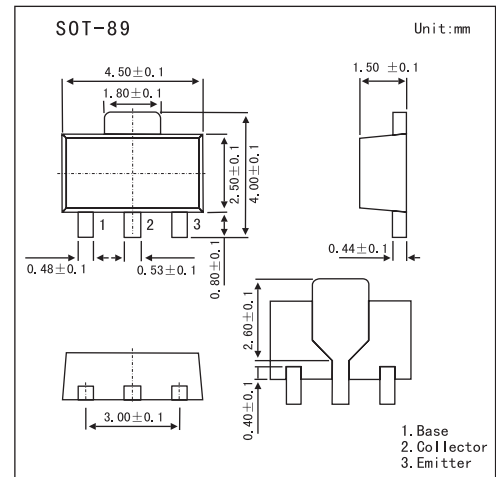


PNP Epitaxial Planar Silicon Transistors

2SB1118

■ Features

- Low collector-to-emitter saturation voltage.
- Very small size making it easy to provide highdensity,

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

| Parameter | Symbol | Rating | Unit |
|---------------------------|-----------|-------------|------------------|
| Collector-base voltage | V_{CB0} | -20 | V |
| Collector-emitter voltage | V_{CE0} | -15 | V |
| Emitter-base voltage | V_{EB0} | -5 | V |
| Collector current | I_C | -0.7 | A |
| Collector current (pulse) | I_{CP} | -1.5 | A |
| Collector dissipation | P_C | 500 | mW |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

2SB1118

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

| Parameter | Symbol | Testconditons | Min | Typ | Max | Unit |
|--------------------------------------|---------------|--|-----|------|------|---------------|
| Collector cutoff current | I_{CBO} | $V_{CB} = -15\text{V}, I_E = 0$ | | | -0.1 | μA |
| Emitter cutoff current | I_{EBO} | $V_{CB} = -4\text{V}, I_E = 0$ | | | -0.1 | μA |
| DC current Gain | h_{FE} | $V_{CE} = -2\text{V}, I_C = -50\text{mA}$ | 140 | | 560 | |
| | | $V_{CE} = -2\text{V}, I_C = -500\text{mA}$ | 60 | | | |
| Gain bandwidth product | f_T | $V_{CE} = -10\text{V}, I_C = -50\text{mA}$ | | 250 | | MHz |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -5\text{mA}, I_B = -0.5\text{mA}$ | | -15 | -35 | V |
| | | $I_C = -100\text{mA}, I_B = -10\text{mA}$ | | -60 | -120 | |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C = -100\text{mA}, I_B = -10\text{mA}$ | | -0.8 | -1.2 | V |
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C = -10\mu\text{A}, I_E = 0$ | -20 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C = -1\text{mA}, R_{BE} = \infty$ | -15 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E = -10\mu\text{A}, I_C = 0$ | -5 | | | V |
| Output capacitance | C_{ob} | $V_{CB} = -10\text{V}, f = 1\text{MHz}$ | | 13 | | pF |

■ h_{FE} Classification

| Marking | BA | | |
|----------|---------|---------|---------|
| | S | T | U |
| h_{FE} | 140~280 | 200~400 | 280~560 |