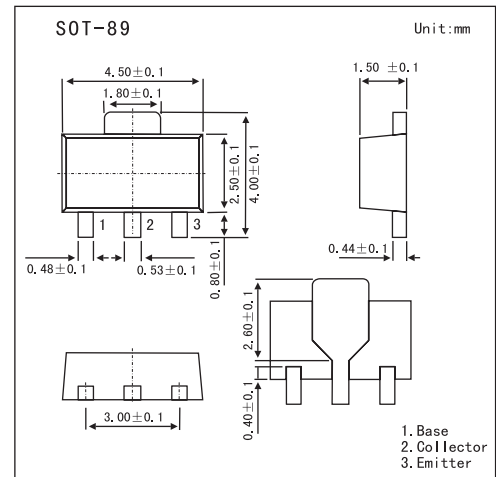


PNP Epitaxial Planar Silicon Transistors

2SB1120

■ Features

- Low collector-to-emitter saturation voltage :
 $V_{CE(sat)max} = -0.45V$.
- Large current capacity : $I_C = -2.5A$, $I_{CP} = -5A$.
- Very small size making it easy to provide high density, small-sized hybrid IC:s.

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

| Parameter | Symbol | Rating | Unit |
|---------------------------|-----------|-------------|------------|
| Collector-base voltage | V_{CB0} | -20 | V |
| Collector-emitter voltage | V_{CEO} | -10 | V |
| Emitter-base voltage | V_{EBO} | -7 | V |
| Collector current | I_C | -2.5 | A |
| Collector current (pulse) | I_{CP} | -5 | A |
| Collector dissipation | P_C | 500 | mW |
| Junction temperature | T_j | 150 | $^\circ C$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ C$ |

■ Electrical Characteristics $T_a = 25^\circ C$

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|-------------------------------|-----|-------|-------|------|
| Collector cutoff current | I_{CBO} | $V_{CB} = -16V, I_E = 0$ | | | -100 | nA |
| Emitter cutoff current | I_{EBO} | $V_{CB} = -4V, I_E = 0$ | | | -100 | nA |
| DC current Gain | h_{FE} | $V_{CE} = -2V, I_C = -500mA$ | 100 | | 560 | |
| | | $V_{CE} = -2V, I_C = -3A$ | 70 | | | |
| Gain bandwidth product | f_T | $V_{CE} = -10V, I_C = -50mA$ | | 250 | | MHz |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -1.5A, I_B = -0.15A$ | | -0.25 | -0.45 | V |
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C = -10\mu A, I_E = 0$ | -20 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C = -1mA, R_{BE} = \infty$ | -10 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E = -10\mu A, I_C = 0$ | -7 | | | V |
| Output capacitance | C_{ob} | $V_{CB} = -10V, f = 1MHz$ | | 70 | | pF |

■ h_{FE} Classification

| Marking | BC | | |
|----------|---------|---------|---------|
| | E | F | G |
| Rank | | | |
| h_{FE} | 100~200 | 160~320 | 280~560 |