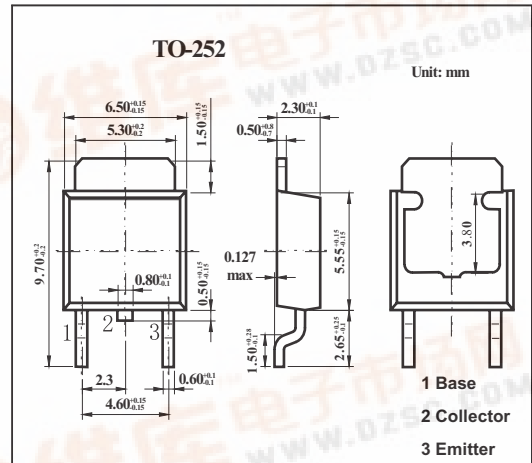


SMD Type Transistors

Silicon PNP Epitaxial Planar Type
2SB930A

■ Features

- High forward current transfer ratio hFE which has satisfactory linearity.
- Low collector-emitter saturation voltage $V_{CE(sat)}$.



■ Absolute Maximum Ratings Ta = 25°C

| Parameter | Symbol | Rating | Unit |
|-----------------------------|-----------|-------------|------|
| Collector-base voltage | V_{CBO} | -80 | V |
| Collector-emitter voltage | V_{CEO} | -80 | V |
| Emitter-base voltage | V_{EBO} | -5 | V |
| Collector current | I_C | -4 | A |
| Peak collector current | I_{CP} | -8 | A |
| Collector power dissipation | P_C | 1.3 | W |
| Junction temperature | T_J | 150 | °C |
| Storage temperature | T_{stg} | -55 to +150 | °C |

■ Electrical Characteristics Ta = 25°C

| Parameter | Symbol | Testconditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|---|-----|-----|------|---------------|
| Collector-emitter voltage | V_{CEO} | $I_C = -30\text{ mA}, I_B = 0$ | -80 | | | V |
| Collector cutoff current | I_{CES} | $V_{CE} = -80\text{ V}, V_{BE} = 0$ | | | -400 | μA |
| | | $V_{CE} = -60\text{ V}, I_B = 0$ | | | -700 | μA |
| Emitter-base cutoff current | I_{EBO} | $V_{EB} = -5\text{ V}, I_C = 0$ | | | -1 | mA |
| Forward current transfer ratio | hFE | $V_{CE} = -4\text{ V}, I_C = -1\text{ A}$ | 70 | | 250 | |
| | | $V_{CE} = -4\text{ V}, I_C = -3\text{ A}$ | 15 | | | |
| Base to emitter voltage | V_{BE} | $V_{CE} = -4\text{ V}, I_C = -3\text{ A}$ | | | -2 | V |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -4\text{ A}, I_B = -0.4\text{ A}$ | | | -1.5 | V |
| Transition frequency | f_T | $V_{CE} = -10\text{ V}, I_C = -0.5\text{ A}, f = 10\text{ MHz}$ | | 20 | | MHz |
| Turn-on time | t_{on} | $I_C = -4\text{ A}, I_{B1} = -0.4\text{ A}, I_{B2} = 0.4\text{ A}, V_{CC} = -50\text{ V}$ | | 0.2 | | μs |
| Storage time | t_{stg} | | | 0.5 | | μs |
| Fall time | t_f | | | 0.2 | | μs |

■ hFE Classification

| Rank | Q | P |
|------|--------|---------|
| hFE | 70~150 | 120~250 |

