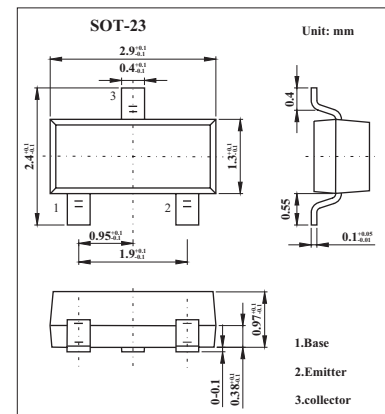


## Silicon NPN Epitaxial Planar Type

## 2SC3125



### ■ Features

- Good Linearity of  $f_T$

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

| Parameter                   | Symbol    | Rating      | Unit             |
|-----------------------------|-----------|-------------|------------------|
| Collector-base voltage      | $V_{CB0}$ | 30          | V                |
| Collector-emitter voltage   | $V_{CEO}$ | 25          | V                |
| Emitter-base voltage        | $V_{EBO}$ | 4           | V                |
| Collector current           | $I_C$     | 50          | mA               |
| Base current                | $I_B$     | 25          | mA               |
| Collector Power Dissipation | $P_C$     | 150         | mW               |
| Junction temperature        | $T_j$     | 125         | $^\circ\text{C}$ |
| Storage temperature Range   | $T_{stg}$ | -55 to +125 | $^\circ\text{C}$ |

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

| Parameter                            | Symbol        | Testconditions  | Min | Typ | Max | Unit          |
|--------------------------------------|---------------|---|-----|-----|-----|---------------|
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = 30\text{V}, I_E = 0$                            |     |     | 0.1 | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = 3\text{V}, I_C = 0$                             |     |     | 1.0 | $\mu\text{A}$ |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C = 10\text{mA}, I_B = 0$                              | 25  |     |     | V             |
| DC current gain                      | $h_{FE}$      | $V_{CE} = 10\text{V}, I_C = 10\text{mA}$                  | 20  | 70  | 200 |               |
| Saturation Voltage Collector-Emitter | $V_{CE(sat)}$ | $I_C = 15\text{mA}, I_B = 1.5\text{mA}$                   |     |     | 0.2 | V             |
| Saturation Voltage Baser-Emitter     | $V_{BE(sat)}$ |   |     |     | 1.5 | V             |
| Transition Frequency                 | $f_T$         | $V_{CE} = 10\text{V}, I_C = 10\text{mA}$                  | 250 | 600 |     | MHz           |
| Collector Output Capacitance         | $C_{ob}$      | $V_{CC} = 10\text{V}, I_E = 0, f = 1\text{MHz}$           |     | 1.1 | 1.6 | pF            |
| Collector-Base Time Constant         | $C_{c,rb}$    | $V_{CB} = 10\text{V}, I_C = 1\text{mA}, f = 30\text{MHz}$ |     |     | 25  | ps            |

### ■ Marking

|         |    |
|---------|----|
| Marking | HH |
|---------|----|