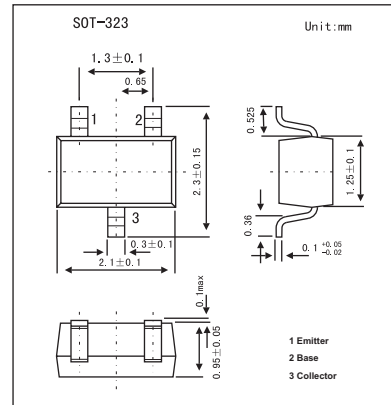


2SC4173

■ Features

- High gain bandwidth product: $f_T=200\text{MHz}$ min.



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

| Parameter | Symbol | Rating | Unit |
|---------------------------|-----------|-------------|------------------|
| Collector-base voltage | V_{CB0} | 60 | V |
| Collector-emitter voltage | V_{CEO} | 40 | V |
| Emitter-base voltage | V_{EBO} | 5 | V |
| Collector current | I_C | 500 | mA |
| Total power dissipation | P_T | 150 | mW |
| 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} | $V_{CB} = 40\text{V}, I_E=0$ | | | 100 | nA |
| Emitter cutoff current | I_{EBO} | $V_{EB} = 4\text{V}, I_C=0$ | | | 100 | nA |
| DC current gain * | h_{FE} | $V_{CE} = 1\text{V}, I_C = 150\text{mA}$ | 75 | 150 | 300 | |
| Collector-emitter saturation voltage * | $V_{CE(sat)}$ | $I_C = 500\text{mA}, I_B = 50\text{mA}$ | | 0.25 | 0.75 | V |
| Base-emitter saturation voltage * | $V_{BE(sat)}$ | $I_C = 500\text{mA}, I_B = 50\text{mA}$ | | 1.0 | 1.2 | V |
| Gain bandwidth product | f_T | $V_{CE} = 10\text{V}, I_E = -20\text{mA}$ | 200 | 400 | | MHz |
| Output capacitance | C_{ob} | $V_{CB} = 10\text{V}, I_E = 0, f = 1.0\text{MHz}$ | | 3.5 | 8.0 | pF |
| Turn-on time | t_{on} | $V_{CC} = 30\text{V},$ | | 30 | | ns |
| Storage time | t_{stg} | $I_C = 150\text{mA},$ | | 150 | | ns |
| Turn-off time | t_{off} | $I_{B1} = -I_{B2} = 15\text{mA}$ | | 180 | | ns |

*. $PW \leq 350\mu\text{s}, \text{duty cycle} \leq 2\%$

■ h_{FE} Classification

| Marking | B12 | B13 | B14 |
|----------|--------|---------|---------|
| h_{FE} | 75~150 | 100~200 | 150~300 |