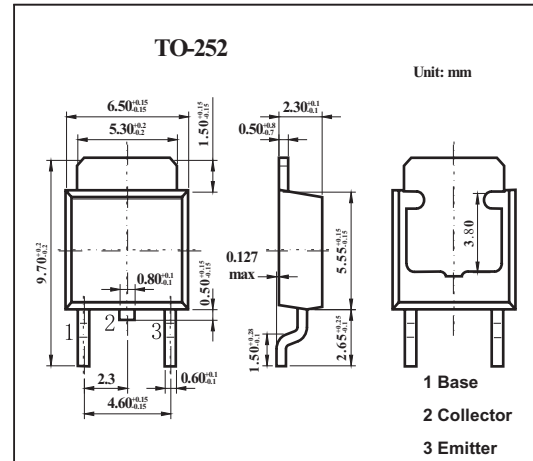


2SC3076

■ Features

- Low Collector Saturation Voltage: $V_{CE(sat)}=0.5V(\text{Max.})(I_C=1A)$
- Excellent Switching Time : $t_{stg}=1.0\mu s(\text{Typ.})$

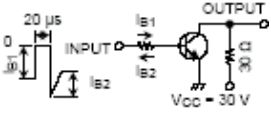


■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Rating | Unit | |
|-----------------------------|-----------|------------------------|------------------|---|
| Collector-base voltage | V_{CBO} | 50 | V | |
| Collector-emitter voltage | V_{CEO} | 50 | V | |
| Emitter-base voltage | V_{EBO} | 5 | V | |
| Collector current | I_C | 2 | A | |
| Base Current | I_B | 1 | A | |
| Collector power dissipation | | $T_a=25^\circ\text{C}$ | 1.0 | A |
| | | $T_C=25^\circ\text{C}$ | 10 | W |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ | |
| Storage temperature | T_{stg} | -55 to 150 | $^\circ\text{C}$ | |

2SC3076

■ Electrical Characteristics Ta = 25°C

| Parameter | Symbol | Testconditions | Min | Typ | Max | Unit | |
|--------------------------------------|----------------------|---|-----|-----|-----|------|----|
| Collector cut-off current | ICBO | V _{CB} = 50 V, I _E = 0 | | | 1.0 | μA | |
| Emitter cut-off current | IEBO | V _{EB} = 5 V, I _C = 0 | | | 1.0 | μA | |
| Collector-emitter breakdown voltage | V _{(BR)CEO} | I _C = 10 mA, I _B = 0 | 50 | | | V | |
| DC current gain | hFE | V _{CE} = 2 V, I _C = 0.5 A | 70 | | 240 | | |
| | | V _{CE} = 2 V, I _C = 1.5A | 40 | | | | |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C = 1A, I _B = 0.05A | | | 0.5 | V | |
| Base-emitter saturation voltage | V _{BE(sat)} | I _C = 1A, I _B = 0.05A | | | 1.2 | V | |
| Transition Frequency | f _T | V _{CE} =2V, I _C =0.5A | | 80 | | MHz | |
| Collector output capacitance | C _{ob} | V _{CB} = 10V, I _E = 0, f = 1 MHz | | 30 | | pF | |
| Switching Time Ture-on Time | t _{on} |  <p>I_{B1} = -I_{B2} = 0.05 A, DUTY CYCLE ≤ 1%</p> | | 0.1 | | μS | |
| switching Time Storage Time | t _{stg} | | | | 1 | | μS |
| Switching Fall Time | t _f | | | | 0.1 | | μS |

■ hFE Classification

| Marking | C3076 | |
|---------|--------|---------|
| Rank | O | Y |
| hFE | 70~140 | 120~240 |