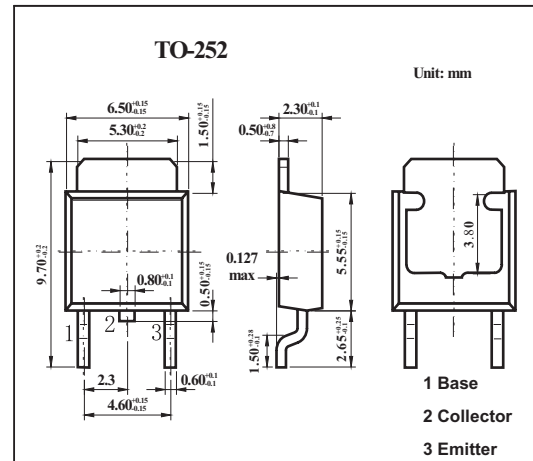


2SD1256

■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$.
- Satisfactory linearity of forward current transfer ratio h_{FE} .
- Large collector current I_C .



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

| Parameter | Symbol | Rating | Unit |
|--|-----------|-------------|------------------|
| Collector-base voltage | V_{CBO} | 130 | V |
| Collector-emitter voltage | V_{CEO} | 80 | V |
| Emitter-base voltage | V_{EBO} | 7 | V |
| Collector current | I_C | 5 | A |
| Peak collector current | I_{CP} | 10 | A |
| Collector power dissipation $T_a = 25^\circ\text{C}$ | P_C | 1.3 | W |
| Collector power dissipation | | 40 | W |
| 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-emitter voltage | V_{CEO} | $I_C = 10\text{mA}, I_B = 0$ | 80 | | | V |
| Collector-base cutoff current | I_{CBO} | $V_{CB} = 100\text{V}, I_E = 0$ | | | 10 | μA |
| Emitter-base cutoff current | I_{EBO} | $V_{EB} = 5\text{V}, I_C = 0$ | | | 50 | μA |
| Forward current transfer ratio | h_{FE} | $V_{CE} = 2\text{V}, I_C = 2\text{A}$ | 90 | | 260 | |
| | | $V_{CE} = 2\text{V}, I_C = 0.1\text{A}$ | 45 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 2\text{A}, I_B = 0.2\text{A}$ | | | 0.5 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C = 2\text{A}, I_B = 0.2\text{A}$ | | | 1.5 | V |
| Transition frequency | f_T | $V_{CE} = 10\text{V}, I_C = 0.5\text{A}, f = 10\text{MHz}$ | | 30 | | MHz |
| Turn-on time | t_{on} | $I_C = 2\text{A}, I_{B1} = -I_{B2} = 0.2\text{A}, V_{CC} = 50\text{V}$ | | 0.5 | | μs |
| Storage time | t_{stg} | | | 1.5 | | μs |
| Fall time | t_f | | | 0.15 | | μs |

■ h_{FE} Classification

| Rank | Q | P |
|----------|--------|---------|
| h_{FE} | 90~180 | 130~260 |