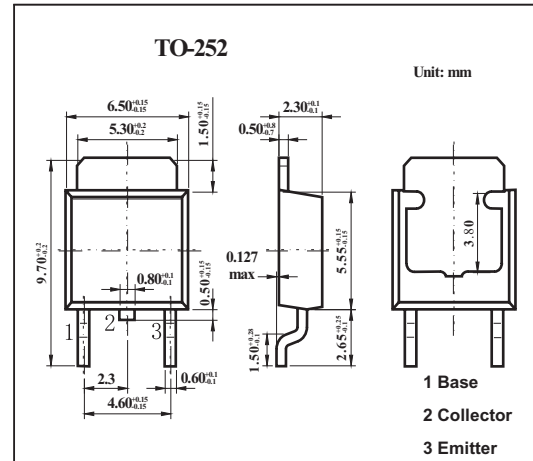


Silicon NPN Triple Diffusion Planar Type

2SD1250

■ Features

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

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

| Parameter | Symbol | Rating | Unit |
|---|-----------|-------------|------------------|
| Collector-base voltage | V_{CB0} | 200 | V |
| Collector-emitter voltage | V_{CE0} | 150 | V |
| Emitter-base voltage | V_{EB0} | 6 | V |
| Collector current | I_C | 2 | A |
| Peak collector current | I_{CP} | 3 | |
| Collector power dissipation $T_C = 25^\circ\text{C}$ | P_C | 1.3 | W |
| | | 30 | 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-base voltage (Emitter open) | V_{CB0} | $I_C = 500 \mu\text{A}, I_E = 0$ | 200 | | | V |
| Collector-emitter voltage (Base open) | V_{CE0} | $I_C = 5 \text{ mA}, I_B = 0$ | 150 | | | V |
| Emitter-base voltage (Collector open) | V_{EB0} | $I_E = 500 \mu\text{A}, I_C = 0$ | 6 | | | V |
| Collector-base cutoff current (Emitter open) | I_{CBO} | $V_{CB} = 200 \text{ V}, I_E = 0$ | | | 50 | μA |
| Emitter-base cutoff current (Collector open) | I_{EBO} | $V_{EB} = 4 \text{ V}, I_C = 0$ | | | 50 | μA |
| Forward current transfer ratio | h_{FE} | $V_{CE} = 10 \text{ V}, I_C = 150 \text{ mA}$ | 60 | | 240 | |
| | | $V_{CE} = 10 \text{ V}, I_C = 400 \text{ mA}$ | 50 | | | |
| Base-emitter voltage | V_{BE} | $V_{CE} = 10 \text{ V}, I_C = 400 \text{ mA}$ | | | 1.0 | V |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$ | | | 1.0 | V |
| Transition frequency | f_T | $V_{CE} = 10 \text{ V}, I_C = 0.5 \text{ A}, f = 1 \text{ MHz}$ | | 20 | | MHz |

■ h_{FE} Classification

| Rank | Q | P |
|----------|-----------|------------|
| h_{FE} | 60 to 140 | 100 to 240 |