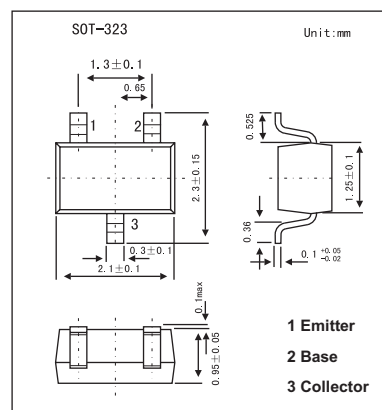


2SD1821

■ Features

- High collector-emitter voltage V_{CE0}
- Low noise voltage NV



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

| Parameter | Symbol | Rating | Unit |
|-----------------------------|-----------|-------------|------------------|
| Collector-base voltage | V_{CB0} | 150 | V |
| Collector-emitter voltage | V_{CE0} | 150 | V |
| Emitter-base voltage | V_{EB0} | 5 | V |
| Peak collector current | I_{CP} | 100 | A |
| Collector current | I_C | 50 | A |
| Collector power dissipation | P_C | 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 | Testconditons | Min | Typ | Max | Unit |
|--------------------------------------|---------------|---|-----|-----|-----|---------------|
| Collector-emitter voltage | V_{CE0} | $I_C = 100 \mu\text{A}, I_B = 0$ | 150 | | | V |
| Emitter-base voltage | V_{EB0} | $I_E = 10 \mu\text{A}, I_C = 0$ | 5 | | | V |
| Collector-base cutoff current | I_{CBO} | $V_{CB} = 100 \text{V}, I_E = 0$ | | | 1 | μA |
| Forward current transfer ratio | h_{FE} | $V_{CE} = 5 \text{V}, I_C = 10 \text{mA}$ | 130 | | 330 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 30 \text{mA}, I_B = 3 \text{mA}$ | | | | V |
| Transition frequency | f_T | $V_{CB} = 10 \text{V}, I_E = -10 \text{mA}, f = 200 \text{MHz}$ | | 150 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = 10 \text{V}, I_E = 0, f = 1 \text{MHz}$ | | 2.3 | | pF |
| Noise voltage | NV | $V_{CE} = 10 \text{V}, I_C = 1 \text{mA}, G_v = 80 \text{dB}, R_g = 100\text{K}\Omega, \text{Function} = \text{FLAT}$ | | 150 | | mV |

■ h_{FE} Classification

| Marking | P | |
|----------|---------|---------|
| | Q | R |
| h_{FE} | 130~220 | 185~330 |