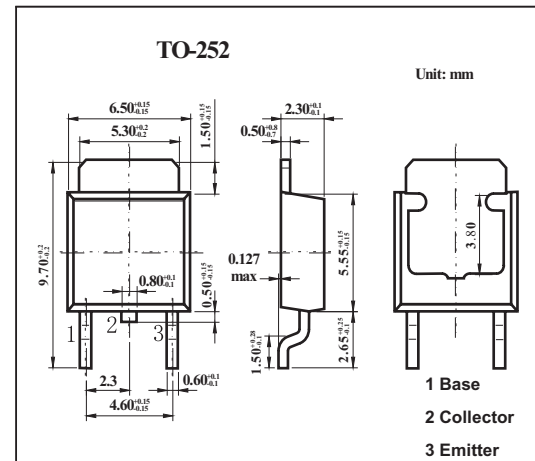


Silicon NPN Epitaxial Transistor

2SD1220



■ Features

- Power Amplifier Applications

■ 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} | 6 | V |
| Collector current | I_C | 1.5 | A |
| Base current | I_B | 1 | A |
| Collector power dissipation | P_C | 1 | W |
| $T_a = 25^\circ\text{C}$ $T_c = 25^\circ\text{C}$ | | 10 | |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature range | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|---|-----|-----|-----|---------------|
| Collector cut-off current | I_{CBO} | $V_{CB} = 150\text{ V}, I_E = 0$ | | | 1.0 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = 6\text{ V}, I_C = 0$ | | | 1.0 | μA |
| Collector-emitter breakdown voltage | $V_{(BR)CE0}$ | $I_C = 10\text{ mA}, I_B = 0$ | 150 | | | V |
| DC current gain | h_{FE} | $V_{CE} = 5\text{ V}, I_C = 200\text{ mA}$ | 60 | | 320 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 500\text{ mA}, I_B = 50\text{ mA}$ | | | 1.5 | V |
| Base-emitter voltage | V_{BE} | $V_{CE} = 5\text{ V}, I_C = 5\text{ mA}$ | 0.5 | | 0.8 | V |
| Transition frequency | f_T | $V_{CE} = 5\text{ V}, I_C = 200\text{ mA}$ | 20 | 100 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$ | | 13 | 20 | pF |

■ hFE Classification

| Marking | D1220 | | |
|---------|-----------|------------|------------|
| Rank | R | O | Y |
| hFE | 60 to 120 | 100 to 200 | 160 to 320 |