

2N4125

PNP EPITAXIAL SILICON TRANSISTOR

T-29-21

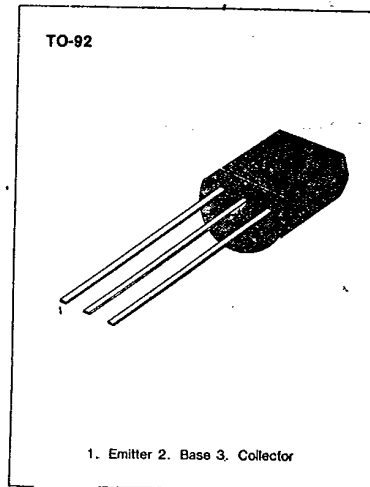
AMPLIFIER TRANSISTOR

- Collector-Emitter Voltage: $V_{CE0} = 30\text{ V}$
- Collector Dissipation: $P_C(\text{max}) = 625\text{ mW}$

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

| Characteristic | Symbol | Rating | Unit |
|---------------------------|-----------|-----------|------------------|
| Collector-Emitter Voltage | V_{CE0} | 30 | V |
| Collector-Base Voltage | V_{CBO} | 30 | V |
| Emitter-Base Voltage | V_{EBO} | 4 | V |
| Collector Current | I_C | 200 | mA |
| Collector Dissipation | P_C | 625 | mW |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -55 - 150 | $^\circ\text{C}$ |

* Refer to 2N3906 for graphs



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ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

| Characteristic | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|----------------------|--|-----|-----|------|------|
| *Collector-Emitter Breakdown Voltage ¹ | BV_{CE0} | $I_C = 1\text{ mA}, I_B = 0$ | 30 | | | V |
| Collector-Base Breakdown Voltage | BV_{CBO} | $I_C = 10\ \mu\text{A}, I_E = 0$ | 30 | | | V |
| Emitter-Base Breakdown Voltage | BV_{EBO} | $I_E = 10\ \mu\text{A}, I_C = 0$ | 4 | | | V |
| Collector Cut-off Current | I_{CBO} | $V_{CB} = 20\text{ V}, I_E = 0$ | | | 50 | nA |
| Emitter Cut-off Current | I_{EBO} | $V_{BE} = 3\text{ V}, I_C = 0$ | | | 50 | nA |
| *DC Current Gain | h_{FE} | $I_C = 2\text{ mA}, V_{CE} = 1\text{ V}$ | 50 | | 150 | |
| | | $I_C = 50\text{ mA}, V_{CE} = 1\text{ V}$ | 25 | | | |
| *Collector-Emitter Saturation Voltage | $V_{CE}(\text{sat})$ | $I_C = 50\text{ mA}, I_B = 5\text{ mA}$ | | | 0.4 | V |
| *Base-Emitter Saturation Voltage | $V_{BE}(\text{sat})$ | $I_C = 50\text{ mA}, I_B = 5\text{ mA}$ | | | 0.95 | |
| Current Gain Bandwidth Product | f_T | $I_C = 10\text{ mA}, V_{CE} = 20\text{ V}$ $f = 100\text{ MHz}$ | 200 | | | MHz |
| Collector Base Capacitance | C_{Cb} | $V_{CB} = 5\text{ V}, I_E = 0, f = 1\text{ MHz}$ | | | 4.5 | pF |
| Noise Figure | NF | $I_C = 100\ \mu\text{A}, V_{CE} = 5\text{ V}$ $R_G = 1\text{ K}\Omega$ Noise Bandwidth = 10Hz to 15.7KHz | | | 5 | dB |

*Pulse Test: Pulse Width $\leq 300\ \mu\text{s}$, Duty Cycle $\leq 2\%$ 