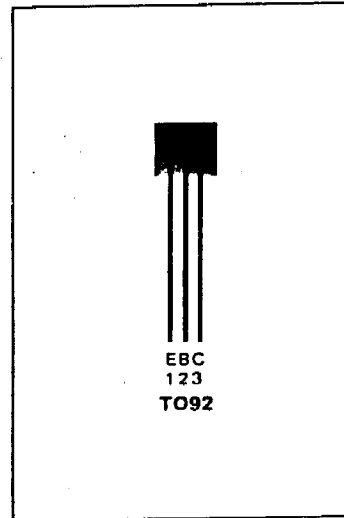


2N4124

NPN SMALL SIGNAL GENERAL PURPOSE AMPLIFIER AND SWITCH

ABSOLUTE MAXIMUM RATINGS

| | | |
|---|--|-----------------|
| †Maximum Temperatures | | |
| Storage Temperature | | -55°C to +150°C |
| Operating Junction Temperature | | 150°C |
| Lead Temperature (60 seconds) | | 230°C |
| †Maximum Power Dissipation | | |
| Total Dissipation at 25°C Case Temperature | | 1.0 W |
| at 25°C Ambient Temperature | | 0.625 W |
| at 70°C Ambient Temperature | | 0.400 W |
| Maximum Voltages and Current | | 2N4124 |
| V _{CB0} Collector to Base Voltage | | 30 V |
| V _{CEO} Collector to Emitter Voltage | | 25 V |
| V _{EBO} Emitter to Base Voltage | | 5.0 V |
| I _C Collector Current | | 200 mA |



ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted)

| SYMBOL | CHARACTERISTIC | 2N4124 | | UNITS | TEST CONDITIONS |
|----------------------|--|--------|------|-------|---|
| | | MIN. | MAX. | | |
| h _{FE} | DC Pulse Current Gain | 120 | 360 | | I _C = 2.0 mA, V _{CE} = 1.0 V I _C = 50 mA, V _{CE} = 1.0 V |
| V _{CE(sat)} | Collector Saturation Voltage | | 0.3 | V | I _C = 50 mA, I _B = 5.0 mA |
| V _{BE(sat)} | Base Saturation Voltage | | 0.95 | V | I _C = 50 mA, I _B = 5.0 mA |
| I _{CB0} | Collector Cutoff Current | | 50 | nA | V _{CB} = 20 V, I _E = 0 |
| I _{EBO} | Emitter Cutoff Current | | 50 | nA | V _{EB} = 3.0 V, I _C = 0 |
| BV _{CB0} | Collector to Base Breakdown Voltage | 30 | | V | I _C = 10 μA, I _E = 0 |
| BV _{CEO} | Collector to Emitter Breakdown Voltage | 25 | | V | I _C = 1.0 mA, I _B = 0 |
| BV _{EBO} | Emitter to Base Breakdown Voltage | 5.0 | | V | I _C = 0, I _E = 10 μA |
| C _{cb} | Collector to Base Capacitance | | 4.0 | pF | I _E = 0, V _{CB} = 5.0 V, f = 100 kHz |
| C _{ib} | Input Capacitance | | 8.0 | pF | I _C = 0, V _{EB} = 0.5 V, f = 100 kHz |
| h _{fe} | Magnitude of Small Signal Current Gain | 3.0 | | | I _C = 10 mA, V _{CE} = 20 V, f = 100 MHz |
| h _{fe} | Small Signal Current Gain | 120 | 480 | | I _C = 2.0 mA, V _{CE} = 10 V, f = 1.0 kHz |
| NF | Noise Figure | | 5.0 | dB | I _C = 100 μA, V _{CE} = 5.0 V, R _S = 1.0 kΩ, f = 10 Hz to 15.7 kHz |

